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Academy of Medicine

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The Mississippi Doctor

The Official Organ of

MISSISSIPPI STATE MEDICAL ASSOCIATION

and

MID-SOUTH POSTGRADUATE MEDICAL ASSEMBLY

W. H. ANDERSON, M. D., EDITOR-IN-CHIEF

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VOLUME 16
JUNE 1938—MAY 1939

N. YORK ACADEMY
OF MEDICINE
JUL -1 1940
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227428

PUBLISHED AT BOONEVILLE, MISS.

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There is no joy so sure, so pure as love.

"Tomorrow and tomorrow"—we may rend
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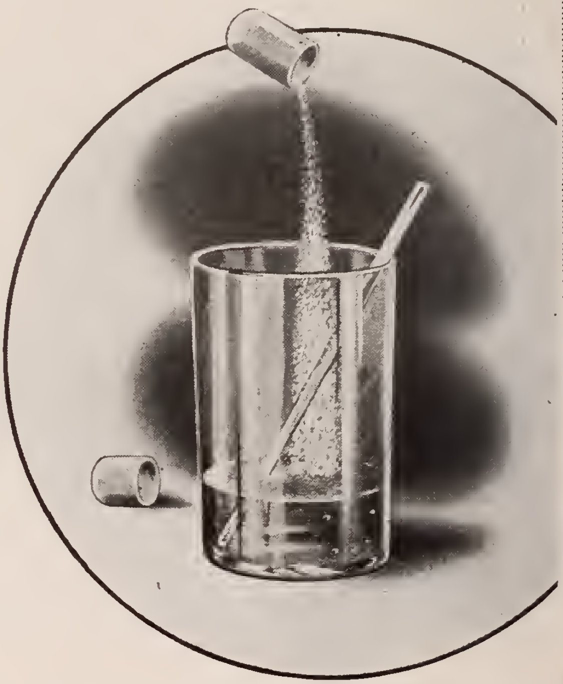

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The Treatment of Some of the Commoner Medical Emergencies[*]

By J. H. MEANS, M.D.[‡]

BOSTON, MASS.

THE PATIENT, when he becomes suddenly and severely ill, wants the doctor to come quickly and to do something—anything—for him. He wants action, or his relatives do. Sometimes the something which must be done is surgical: often it is not.

I want to talk with you today about some of the commoner emergencies which the physician, rather than the surgeon, finds it his duty to treat; such ones as are commonly encountered in the emergency wards of hospitals or which you as private practitioners are summoned to treat in a hurry in the patient's home.

I want especially to relate therapeutics to broad physiologic principles, to indicate the logical approach to problems of emergency treatment, to show how, having carefully observed the clinical picture, one may often deduce the fundamental nature of the morbid process, and having done this, how one may then recognize correctly the indications for treatment. I also want to point out how these indications may be met by relatively simple measures, easily carried out.

I wish to submit that while some laboratory work is indispensable and it would be negligence to omit it, in many instances symptoms and signs give as dependable information as do laboratory tests. In all cases the physician's first dependence should be upon his clinical observation and judgment. Let him beware of the error of supposing that laboratory data can do more than supplement his examination of the patient.

I am minded of the story of the colored "Mammy" who was offered a thermometer to take the temperature of the white child's bath. "Doan need no thermometer," said she, "Ah can tell by de chile. If water am too hot, chile turn red; if water am too cole, chile turn blue." Like Mammy, we also can oftentimes draw a sound deduction concerning the physiologic status of a patient from observance of symptoms. It should be stressed, however, that our ability to do this is frequently due to the fact that we possess knowledge which has been derived from the investigations of laboratory workers who have established what physical and chemical changes lie behind the symptoms in question. These relationships having been once firmly established by such workers need not be re-established by us in every case we see.

A medical emergency usually involves a sudden departure from that steady state of the internal environment first recognized by Claude Bernard and called by Walter B. Cannon "homeostasis." The pathologic state may be one of dehydration, acidosis, hyperthermia, anoxemia, hypo- or hyper-glycemia, or hypo- or hyper-calcemia, or azotemia, or hyperpiesia, or other. The changes may be chemical or physical. More often they are both. Their causes may be varied, but their results and the means for correcting them may be the same.

Our predecessors treated such emergencies by puking, purging, bleeding and sweating. I recall a story told me by my father that when he was a small boy a young physician came to the neighborhood and tried to practice the modern medicine of that day. His new fangled ideas were scorned by an "older practitioner" who remarked, "Young man, ipecac puked before you were born and ipecac will puke long after you are dead." Ipecac, of course, is still capable of puking, but we don't use it often for that purpose; we depend more on intubation of the stomach and lavage and we depend less on purging and sweating than was done a generation or two ago. The induction of diuresis is more in vogue now. We sometimes bleed, as did our predecessors, we also sometimes transfuse blood. We force or limit water, salt or glucose. We give protein, alkali, calcium or oxygen in accordance with certain definite indications. We also give drugs, serums and use physiotherapy.[*] I shall attempt to illustrate the proper application of these methods designed to restore homeostasis by means of some common types of disturbance.

---

[*] From the Medical Clinic of the Massachusetts General Hospital, Boston.

[*] An address delivered on February 15, 1938, at the Mid-South Post Graduate Medical Assembly, at Memphis, Tenn.

[‡] Jackson Professor of Clinical Medicine, Harvard Medical School and Chief of Medical Services, Massachusetts General Hospital.

DIABETIC ACIDOSIS

Here is a situation in which the physician has plenty to do, and must do it quickly. It is an abnormal state in which the general nature of the abnormality is well understood, and in which the indications for treatment can often be completely met. The criteria of diagnosis I will pass by. The picture—coma, hyperpnea, acetone breath, glycosuria, and so forth—is sufficiently characteristic to be unmistakable. The diagnosis is usually obvious.

The train of events which got the diabetic individual into such a jam is somewhat as follows. Diabetes is, we may concede, primarily a disturbance in carbohydrate metabolism. The adjustment to this disturbance which the diabetic individual has affected, by chance or by treatment, breaks down because perhaps of infection, dietary indiscretion, cessation of insulin administration or a sudden strain of nearly any kind. Sugar then piles up rapidly in the blood and pours out in the urine, taking **large amounts of water and salt** with it. Imperfect combustion of sugar leads to imperfect combustion of fat, (The reason why is not precisely known), ketone bodies also pile up in the blood and are excreted in the breath and urine. It is the ketosis which causes the coma. Ketone bodies act like hypnotic drugs.

The state of the patient after these things have happened is one of: (a) dehydration, manifested clinically by dry tongue and skin, pinched look and soft eyeballs; (b) hypochloremia; (c) acidosis, due to ketosis, manifested clinically by hyperpnea, acetone breath and the drowsiness or coma[†]; and (d) hyperglycemia. The indications for treatment are, among others, to correct these errors. They may be met by a program such as the following:

(1) **Shock table.** The patient should be placed on a shock table or its equivalent, that is to say a bed with blankets and heaters, immediately.

(2) He should be catheterized and the **urine examined** for sugar at once to confirm the diagnosis. The catheter may be left inlying in order that frequent specimens can be got for the sugar tests which are going to govern the insulin administration until he emerges from his stupor sufficiently to be able to void at will.

(3) **Insulin** administration should be started immediately the diagnosis is made. It gets more directly at the root of the trouble than anything else because it controls the disordered carbohydrate metabolism. If the patient has never been treated before and has also been a short time in coma, an initial dose of 30 units is appropriate. If the patient has been treated previously and is known to tolerate insulin well, or has been a long time in coma, an initial dose of 50 to 60 units is advisable. In either case the physician should prepare to repeat the dose in half an hour, and thereafter to continue in accordance with the tests for urinary sugar with Benedict's reagent as follows: 20 units for a red or orange test; 15 units for a yellow test; 10 units for a green test. Some patients in diabetic acidosis will require as much as 500 units in the first 12 hours in order properly to be got under control.[‡]

(4) **Saline administration.** Directly measures 1, 2, and 3 have been inaugurated, a vein should be prepared and the intravenous instillation by the drip method of normal saline solution begun. This therapy is hardly, if at all, less important than insulin. It well may be life-saving. Its action is to replace the patient's lost salt and water and restore the chemical integrity of his body fluids. He should receive as much as 5 to 10 liters of normal saline solution in the first 24 hours (120 drops per minute will give him 500 cc. per hour), and it may take as much as 20 liters total before his lost water and salt are completely restored (1 liter of normal saline solution gives 8 grams of sodium chloride; 20 liters therefore give 160 grams).

The index of the effectiveness of insulin treatment is the excretion of sugar (supplemented perhaps by the level of blood sugar); that of the effectiveness of treatment with saline is the degree of dryness of the tongue, skin and mucous membranes and the softness of the eyeballs. When an excess of saline has been given, edema may be produced. This does no great harm unless the patient also has heart disease.

---

[*] The omission of psychotherapy is without significance. It is merely not within the scope of the paper.

[†] The soporific effect is peculiar to ketosis. Other forms of acidosis do not produce it.

[‡] **Blood sugar** determinations though probably not absolutely necessary to adequate treatment are none the less a great aid to accurate management. They can be made on venous blood samples drawn from time to time from the intravenous line or on capillary blood drawn from the ear (0.1 cc. of blood—six big drops—are drawn in a special pipette). For the colorimetric determinations we have found the Vim-Sheftel microcolorimeter, made by the MacGregor Instrument Company, very convenient. The practitioner could easily make these determinations in his office. Single determinations consume about 20 minutes. When several are run together, each additional determination adds perhaps five minutes.

(5) **Gastric lavage.** The stomach should be emptied by tube as soon as possible after the other indications have been attended to (be sure the tube is in the patient's stomach, not his trachea) and washed thoroughly with weak, warm sodium bicarbonate solution (about one dram to the quart of water). The stomach contents of the diabetic patient often show signs of irritation, stasis and sometimes bleeding. Removal of such material may forestall vomiting, with further loss of fluid, or further bleeding.

Such a program as this is sufficient to gain control in many cases of diabetic acidosis. The insulin re-establishes the combustion of glucose, and decreases the concentration of glucose in the blood. Glucose ceases to call for excretion in the urine because the renal threshold for sugar is no longer exceeded. The cause of polyuria is therefore removed, and, consequently, the loss of water and salt from the body is stopped. Under these circumstances the production of ketone bodies ceases as well.

There are, however, some other forms of treatment indicated in special cases. These are alkali, glucose and blood.

(1) **Alkali.** The arguments of such authorities as Joslin against the use of alkali leave us unconvinced. We set against them the opinions of such acid base experts as Gamble and Butler, the acidosis when severe is of itself a highly dangerous state, and that to correct it by the proper use of alkali may in certain cases be life-saving.

There are two phases in the development of an acidosis. First, there is merely an encroachment upon the alkali reserve of the blood without change in the reaction of the blood; later, when the alkali reserve has been greatly diminished there is an actual shift in the reaction of the blood toward the acid side. This is called an uncompensated acidosis, and it is this stage which constitutes a menace to life.

The arguments against the therapeutic use of alkali are leveled chiefly at the attempt through alkali administration to restore completely the blood's alkali reserve. We agree that such a use of alkali is probably to be condemned. On the other hand, the use of alkali in uncompensated acidosis only to the point of restoring to normal the reaction of the blood is altogether to be recommended. It is not necessary to have blood chemical data to use alkali in this way, although, if obtainable, determinations of the carbon dioxide combining power are a great help. Any patient in deep coma with very marked hyperpnea falls within the group in which we think alkali should be given. The method is quite simple. Ampules of sodium racemic lactate, 20 grams to the ampule, are on the market ready for use. Into one liter of our intravenous saline we place the contents of two such ampules. We allow this mixture to run in until the hyperpnea is definitely decreased; then we switch back to saline alone. There is no danger of producing an alkalosis of importance if alkali is used in this way, unless perchance the patient has poorly functioning kidneys. In persons with poorly functioning kidneys, alkali should be given very cautiously. The advantage of sodium racemic lactate over sodium bicarbonate is that it is metabolized more slowly. Therefore the risk of producing alkalosis is cut down.

(2) **Glucose.** One might ask, "Why give glucose to a person already overflowing with it?" The answer is, "Don't." However, there are certain situations in diabetic acidosis in which glucose is indicated: first, in severe acidosis with low blood sugar, (this is seen most often in persons with associated renal disease); second, in cases in which the urinary sugar diminishes rapidly under insulin, but acidosis as indicated by hyperpnea (or low CO_2 combining power in the blood) persists. The giving of glucose, with insulin to cover, under these circumstances is the best method of stopping the production of ketone bodies. Finally, later on, one may give glucose intravenously in cases in which it is not possible to get in as much as 120 grams of carbohydrate orally per day.

Glucose may be given intravenously along with saline as a 2.5 to 5 per cent solution. After several hours of drip infusion the blood sugar should be redetermined and further administration governed accordingly.

(3) **Blood.** Sometimes the acidotic diabetic is obviously in a state of vasomotor shock. Under these circumstances it is advisable to transfuse. The procedure of blood transfusion

no longer requires the surgeon. The physician can administer properly matched, citrated blood through a needle inlying in the vein by the slow drip gravity method as easily as he infuses saline.

When the patient is in shock and there may therefore be poor absorption of subcutaneously injected fluid, it is well to give insulin intravenously. It can be injected by means of a needle into the rubber tubing of the intravenous line. The dosage is the same.

I should like to make it clear that in the case of alkali, glucose or blood it is a question of whether to give it in addition to normal saline, not in place of saline.

ACUTE RENAL INSUFFICIENCY

The problem in acute renal insufficiency forms an excellent contrast to that in diabetic acidosis. The diabetic person in coma got into that condition chiefly from having sustained a loss of certain substances from his body. An important indication was to make good this loss and prevent further loss. The individual with acutely incompetent kidneys, on the other hand, is in trouble because he cannot eliminate. He has oliguria or anuria instead of polyuria. Of course, he may go to the point of vomiting, and then we have a combination of pathologic retention and pathologic loss. The problem in diabetic acidosis, at least if the kidneys are all right, is simple; the problem when the kidneys, which are among the most important preservers of homeostasis, are damaged, is complicated.

One encounters acute renal insufficiency, of course, in Bright's disease.. It is also met with in bichloride of mercury poisoning and in cases of intravascular hemolysis from any cause, after transfusions, for example. Reflex anuria is seen occasionally. After one kidney is removed, the other reflexly shuts down in some instances. Bilateral infarction of the kidney and other rare forms of insult may cause the kidneys to cease functioning.

The prime indication in acute renal insufficiency, from any cause, is to get the kidneys going again, that is to say, to induce diuresis. This is the precise opposite to the indication in diabetic acidosis in which we wish to stop a naturally occurring diuresis.

If you want fluid to stay in the body, give normal saline solution. If you want it to come out, that is to say, to produce diuresis, give plain water. Of course, you cannot give plain water intravenously. A fatal hemolysis would result. But you can give 5 per cent glucose solution in water intravenously. This is isotonic with the blood and causes no hemolysis. The sugar is burned leaving the water to dilute the blood plasma, and such dilution is a natural stimulus to the kidney to excrete. If we can get water going out through the kidneys, solids are bound to be removed as well.

The intravenous infusion of 5 per cent glucose in pure water is certainly the best therapeutic procedure when the patient's status is one of azotemia, edema and dehydration, all at once, as is often the case when the kidneys have acutely failed.

Sometimes in renal failure the plasma proteins can be shown to be low. Why this is so, is not known. The plasma proteins are a great mystery, but it is known that when they are low edema formation is accelerated. Therefore it is well to raise their level if we can. The only way of doing this that we know is by the transfusion of blood. Transfusion will also tend to correct the anemia which is often present in patients whose kidneys are inadequate.

When, in uremia, convulsions occur, we may employ either hypertonic glucose solution (100 to 200 cc. of 25 to 50 per cent solution) or magnesium sulphate (20 cc. of 10 per cent solution) intravenously. The effect of the former depends upon its hygroscopic action on the brain, a physical result; that of the latter upon its sedative action on the brain, a pharmacodynamic result.

Let me cite a case to illustrate some of these points.

Case No. 1. (M.G.H. No. 42658). Mrs. M., a Greek woman of forty-nine, had had five days before entry an injection of quinine urethane for varicose veins in her leg in our out-patient department. It was the second time this had been done. On the first occasion there had been no untoward consequences. The day following the second injection, however, she passed, according to her story, about two quarts of black urine and thereafter almost no urine at all. At entry she was dopey, edematous, had a uriniferous breath and was clearly uremic. The non-protein nitrogen of her blood was 95 mgs. per cent.

She was given 5 per cent glucose in water in large amounts, in the hope of producing diuresis, and, because her plasma protein was found to be low, she received some blood transfusions as well. The output of urine slowly increased for a week and then she had a superb diuresis and made an uneventful recovery. The urine showed no evidence of nephritis at all. We concluded that her urinary shut down had been the result of an intravenous hemolysis, cause unknown. We suspected that the quinine urethane injection was in some way responsible, but we could not discern how. No hypersensitivity to either quinine or urethane could be demonstrated. We also satisfied ourselves that some agent had not been administered by mistake.

ACUTE HEPATIC INSUFFICIENCY

Acute hepatic insufficiency occurs sometimes in the course of severe infectious (catarrhal) jaundice. It is also met with as an acute episode in cirrhosis of the liver, perhaps because of added infection, excess of alcohol or starvation, and in acute toxic hepatitis, as from cincophen poisoning.

The picture is one of an obviously sick patient with marked anorexia, slight to marked jaundice, a mousy odor to the breath (due to acetamide), oliguria and often edema. It may be possible by percussion to show that the liver is smaller than normal, and in the urine tyrosin crystals may be found. The life of a patient presenting such a picture is in grave danger.

The morbid state is one in which the liver is markedly depleted of its glycogen, the plasma proteins are markedly reduced, especially albumen, and water is retained in the body. Also, according to Snell*, there may be anoxemia.

The prime indication for treatment is to protect the liver and permit it to regenerate and recover (the organ has a tremendous regenerating power), and to correct the errors which its malfunctioning have brought about. The most specific protection to the liver is afforded by flooding the body with glucose. That this is the correct way to meet the indications finds testimony in both experimental and clinical observations. It has been shown, for example, that hepatectomy in animals causes a rapidly fatal hypoglycemia, and also that the life of hepatectomized animals can be definitely prolonged by the administration of large amounts of glucose. Furthermore, it is well-known that glucose administration increased the ability of the liver to withstand the toxic effects of hepatic poisons, such as chloroform.

On the basis of evidence of this sort, C. M. Jones, at the Massachusetts General Hospital, has treated patients with acute hepatic insufficiency by infusing intravenously very large quantities of concentrated glucose solution. He gives as much as a liter a day of a 25 per cent solution by intravenous drip, often continuing for weeks. If the vein is washed out with 200 to 300 cc. of saline at the end of the glucose infusion, there is but little danger of thrombosis.

Jones has also shown that it is very important to obtain a diuresis. Indeed, it is quite evident that the clinical condition of many of these patients makes a rapid change for the better as soon as they have a diuresis. The appearance of diuresis is good news in these cases. In order to encourage diuresis we give the glucose in water, not saline, unless because of vomiting chloride has been lost from the body. It will also promote diuresis and rid the body of edema if the plasma protein can be elevated. For this reason successive transfusions are of great value in cases of hepatic insufficiency. In patients with cyanosis, oxygen therapy may be valuable. Such measures will save the lives of some patients. They are worth pushing to the limit. I will cite another case by way of illustration.

Case No. 2. (M.G.H. No. 81481). Mrs. Mz., a colossally obese Italian woman of thirty-five, for five years had had symptoms suggestive of gall stones. These had been attacks of biliousness and transient jaundice. She was in one of these at entry, rather worse than previous attacks. Her belly had been growing bigger. She felt ill. Her belly was indeed large. I think as large as any I have ever observed in a human. She was moderately jaundiced and her breath had a mousy odor. So obese was her belly, and so distended with gas were her abdominal hollow viscera, that it was impossible to say with certainty whether she had ascites and how big was the liver.

Having an expert endoscopist at hand in Dr. E. B. Benedict, I asked for an abdomenoscopy. Dr. Benedict found, and withdrew, a moderate ascites, and was able to show that the liver was markedly atrophic. It was concluded that the patient was suffering from acute yellow atrophy, probably an acute episode in the course of chronic cirrhosis.

She was started on a regime of one liter of 25 per cent glucose intravenously, daily, and she also received Karo Corn Syrup and barley candy by mouth, bringing her total glucose intake up to 600 grams a day. That on this large intake she never excreted any glucose in the urine is good evidence that a high intake of glucose was necessary for her. Her condition in this respect is the opposite to that of the diabetic. She was kept on this regime for five weeks and was also given a series of blood transfusions. She got a diuresis and improved considerably, sufficiently so that discharge to her home was possible. In a few weeks, however, she relapsed, and at the present writing the prognosis is very doubtful.

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*Snell, A. M.: The Effect of Chronic Disease of the Liver on the Composition and Physiochemical Properties of Blood: Changes in the Serum Proteins; Reduction in the Oxygen Saturation of the Arterial Blood, Annals of Internal Medicine 1935:9:690.

ACUTE CARDIAC INSUFFICIENCY

The left heart may fail before the right. This is most likely to occur in older patients with sclerosis, coronary disease or hypertension.

The picture is one of sudden severe dyspnea, orthopnea, a chest full of moist rales and frothy, often pinkish, sputum. Cyanosis is variable.

The morbid state is characterized chiefly by acute congestion and edema of the lungs, occasioned by the inability of the left ventricle to move the blood mass on at a rate corresponding to that at which the right heart delivers blood to the pulmonary circuit. Much the same thing can happen without left ventricular failure, so P. D. White has shown, in cases of marked mitral stenosis.

The physician on finding a patient in such a state must act in a hurry. First he should give morphin in adequate dosage, at least a quarter of a grain repeated in a short time if necessary.

This may be sufficient to give relief. If it is not, the most direct way to relieve the embarrassed left heart, and at the same time ease the jam in the pulmonary circuit, is to diminish the volume of the circulating blood by venesection. A rather small withdrawal of 300 to 500 cc. may serve the purpose.

After the left ventricle has failed, the right may follow suit. Or there may be primary failure of the right heart as in cor pulmonale. Acute cor pulmonale, so White has shown, may occur as a result of pulmonary embolism.

The picture of right-sided failure is one of increased venous pressure manifested by engorged neck and other veins, cyanosis, engorgement of the liver and, of course, often dropsy.

When such a condition comes on acutely, venesection is the most direct method of relieving the venous engorgement; and oxygen administration of relieving anoxemia. Oxygen may be given by nasal catheter, if an oxygen tent is not available; but an oxygen tent is to be preferred.

Of course, in any type of heart failure full digitalization and diuresis, with such a drug as salyrgan should be accomplished, but I shall not go further into that as my purpose is merely to point out the immediate procedures for urgent cases.

Massive hemorrhage from the upper alimentary canal is a common occurrence and constitutes a situation that the physician must deal with promptly. Only rarely will he have to ask the surgeon to intervene during active bleeding. However, he will do well in these cases early to ask for the surgeon's opinion in consultation.

The points I want to make concerning gastro-intestinal bleeding as a medical emergency are, first, that the slow drip transfusion is an easy and safe and very likely life-saving procedure. It has been argued against transfusing a patient who is actively bleeding that the blood introduced will immediately run out, and that, indeed, by raising blood pressure, transfusion will actually augment hemorrhage. This may be true for large transfusions rapidly given. I do not believe that it applies at all to a slow drip. The patient who has bled massively needs fluid. If we are not going to give him much by stomach we shall have to give fluid by vein. As I have just said, some of this should be blood. The rest may well be 5 per cent glucose in saline, given at a rate of not over 60 drops per minute.

Some authorities advise emptying of stomach and continued drainage by inlying stomach tube. This has not been our practice, although we have no argument to raise against it. We do believe in earlier feeding in gastric bleeding than we did a few years ago. A liquid diet can be started at once and a semi-solid in a few days. There seems to be no good evidence that this ever aggravates the bleeding. Morphin we use sparingly. In many cases it can be dispensed with, barbiturates being sufficient in the way of sedatives.

CONCLUDING REMARKS

My purpose is to urge the physician, in these medical emergencies and others, to plan his treatment in terms of indications derived from understanding of the nature of the morbid state, not upon rule of thumb.

The indications in certain type departures from normal can be definitely stated and widely applied regardless of the cause of the departure.

Thus dehydration, regardless of cause, should be treated with normal saline, and if calories are needed also, glucose can be added to the saline. Any individual who has lost a lot of fluid, whether by vomiting, sweating, polyuria or diarrhea, is bound to have lost chloride as well. That is why replacement should be by saline rather than by water alone. Dehydration is encountered not only in diabetic acidosis, but in severe infections, in thyrotoxicosis, in severe alcohol intoxication and in the crises of Addison's disease. In any of these situations, intravenous saline and plenty of it is indicated. Occasionally a situation will be encountered in which after fluid loss the individual's thirst has led him to take large amounts of water. He is then in need chiefly of chloride. We often use chocolate coated pills of one gram of sodium chloride in such cases, in lobar pneumonia, for example, giving up to ten pills a day.

Oliguria or anuria, regardless of cause, is best treated with intravenous isotonic or hypertonic glucose in water. The object being here to promote diuresis rather than restore lost fluid.

The indications for blood-letting are venous engorgement and pulmonary edema. The indications for transfusion are shock, low plasma protein and anemia. The indication for oxygen therapy is anoxemia of any sort, manifested clinically by acute cyanosis.

Severe acidosis, regardless of cause—diabetic or other, should be treated by alkali administration. Alkali should be given only to the point of relieving hyperpnea, not with the intent to restore completely the plasma base.

The severely damaged liver is best protected by flooding the body with glucose, this being the most effective way of replenishing the exhausted glycogen store, and by transfusion which restores the plasma protein.

These several procedures and others like them, of which time has not permitted mention, can be called collectively procedures designed to restore homeostasis and they constitute a major portion of the treatment of medical emergencies.

The Clinical Significance of Recent Endocrine Developments*

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IT IS unlikely that in any other field of medicine progress is so rapid as in endocrinology. A relatively small part of this progress is immediately and directly of interest to the clinician. Progress in the entire field might be discussed under four heads: (1) advances in physiology; (2) diagnostic procedures; (3) treatment and therapeutic agents; (4) a changing attitude on the part of the majority of the profession toward endocrinology in general and some phase of it in particular. Reference will be made to this later in the paper, but because of the limitation of time I shall confine most of my remarks to discussion of treatment with some slight allusions to diagnosis.

General Principles. Endocrinopathies should be studied from the same standpoint as other syndromes. That is, the diagnosis is based on the following factors enumerated in the order of their importance: (1) a careful and extensive history (in no other field of medicine is this of greater importance); (2) physical examination; and (3) pertinent laboratory data. Non-endocrine conditions should be ruled out. This is sometimes done most easily and advantageously by means of a therapeutic test. Hypofunctional conditions outnumber hyperfunctional affairs in the ratio of at least five to one. Practically every case is a pluriglandular affair by the time it arrives at the doctor's office. Treatment should be planned accordingly.

The discussion as to whether endocrine preparations are stimulative or merely substitution therapy need not greatly concern us. The fact is that deficiency states are quite common, may be readily recognized and treatment with appropriate therapy is successful in the majority of cases. It may need to be carried on over a period of months and sometimes years, but treatment is not a permanent program. Hyperfunctional states present entirely different problems which will be discussed here only as they relate to diabetes mellitus and essential hypertension. Desiccated thyroid in amounts just short of that producing tremor, tachycardia, nervousness or irritability adds to the efficiency of treatment of any glandular deficiency with the possible exception of Addison's disease and hypogonadism of the eunuchoid type.

The prognosis of endocrinopathies is governed by practically the sam factors as that of other conditions; i. e., the earlier the condition is recognized, the more adequately it is treated, the better the outlook for recovery. Treatment should begin when the diagnosis is made. Seldom is anything gained by waiting.

Glandular Dyscrasias Most Frequently Encountered. Some months ago in looking over a series of our own private cases we noted the glandular involvements set for in Table I.

Table I

Endocrine Cases	665
Pituitary	90
Thyroid	70
Gonads	32
Adrenals	10
Pituitary-thyroid	233
Pituitary-gonads	125
Pituitary-adrenals	41
Miscellaneous	64

A series of some 300 patients seen at the Elgin State Hospital for the Insane showed their glandular dyscrasias to exist in substantially the same percentages as in private cases.

Growth Deficiencies in Children. As the preceding speaker has dealt with endocrine problems in childhood, I shall mention only two, Froehlich's syndrome and cryptorchidism. A fact often overlooked is that Froehlich's syndrome is characterized by obesity and lack of genital development but the stature is not necessarily below normal. For the treatment of this condition thyroid should be given in the manner already described. Posterior lobe extract should be given in doses just short of that which causes annoying intestinal cramps or a bowel movement. This dose is determined by watching the effect of gradually increased doses. Young children should be given three minims of obstetrical or surgical pituitrin and kept around the office until one observes whether they have cramps or any other unpleasant disturbance from it. A marked pallor will follow even a dose of three minims, but this is of no significance in determining the dose. If cramps do not follow this small dose, then two or three days later the dose should be increased by two minims and so on until the correct dosage is determined. This should then be given two or three times a week.

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*Read before the Mid-South Post-Graduate Medical Assembly, Memphis, Tenn., Feb. 16, 1938.

If the height is normal, some gonadotropic preparation should be used. A partial list of these is as follows:

Prephysin
Gynantrin
Maturity Factor
Antuitrin-S
Antophysin
A. P. L.
Follutein

The dosage of these gonadotropic preparations should be 50 units twice a week. If in one month there is no evidence of increased growth in the genitalia, this dose should be doubled and in two weeks it should be doubled again if necessary. In the meantime the urine should be carefully watched as the administration of gonadotropic preparations is sometimes followed by the development of glycosuria. Also the long bones should be x-rayed once or twice a year to be sure that premature closure of the epiphyseal lines does not occur.

This treatment sometimes has to be continued for a number of years. However, treatment should be interspersed with rest periods of anywhere from 30 to 90 days. But the child should be kept under careful observation until his genital development is normal and his weight materially reduced.

In some cases antuitrin or some other whole extract of the anterior lobe may be more effective than the gonadotropic preparations. In any event, the treatment is apt to be more effective if one of these whole extracts is used every third week in place of the gonadotropic preparations.

If the child is below average height, the treatment may be given as just outlined except that one should modify it to the extent of using one of the whole lobe extracts such as antuitrin at least one-half the time. If the genitalia reach normal proportions before the height has increased to normal, the gonadotropic medication should be discontinued and antuitrin or some other whole lobe extract used exclusively. Before the gonadotropic preparations were available I treated many such youngsters quite successfully with plain antuitrin.

Cryptorchidism. This may occur in boys of any height and either thin or obese. In general the outlook is better in the obese. In all cases thyroid should be given as already indicated, but tall boys and those of average weight will tolerate much less than the obese. Gonadotropic preparations should be given in every case. The dose should be 50 units three times a week for one month. If no improvement is noted, this dosage should be doubled the second month. In some cases it is necessary to give 200 or even 300 units per dose. Some men prefer to give a rest period of about 30 days after each series of 20 injections has been given. My own practice is to have infrequent rest periods but to reduce the frequency of treatment after two or three months to two injections per week.

The same precautions as to glycosuria and premature closure of the epiphyseal lines should be observed as was mentioned under Froehlich's syndrome. The rate of growth in height should also be watched and medication changed to an extract of the anterior lobe if the rate is less than normal. Recently Huhner reported the successful treatment of cryptorchidism in an adult.

One should assure himself in advance, if possible, that no mechanical defect is present sufficient to prevent proper descent of the testicle. It is not always possible to do this and in any event this line of procedure should be carried out for at least 90 days—and in my opinion it would be better to carry it out for six months—before advising surgical treatment of the condition. In the meantime this treatment will have rendered the surgeon's work less hazardous and more likely to be followed by satisfactory results.

Impotence. Until quite recently most physicians were loath to treat cases of impotence. It was felt that our armamentarium contained few remedies apt to be productive of satisfactory results except as they were a medium of carrying on psychotherapy. This is no longer true since the gonadotropic and male sex hormone preparations have become available.

The outlook in young men is quite hopeful. It goes without saying that the general health should be attended to. Foci of infection, wasting diseases and all non-endocrine conditions should be corrected. Endocrine deficiencies other than those directly concerned with the sexual function, if present, should be recognized and properly evaluated in outlining treatment. These men frequently have some thyroid or adrenal insufficiency, but the pituitary is usually the primary seat of the trouble. Up to middle age, one of the gonadotropic preparations should be used in practically every case, usually in doses of 50 units three times a week for a couple of weeks, then, if satisfactory results have not been achieved, 100 units twice a week for two months, then once a week until the condition is corrected.

In men of middle age or beyond, the gonadotropic preparations should be used with some care owing to the danger of inducing prostatic hypertrophy. In men of this age group some of the male sex hormone preparations will need to be used in nearly every case. These should be given one ampoule three times a week for two weeks, then twice a week for two more weeks and then once a week until the desired results are obtained. A partial list of these preparations is as follows:

Perandren
Oreton

Sterility. In the male this is frequently a difficult matter to determine, but recently Heckel[1] reported his studies in 20 sterile male patients. In treatment he used antuitrin and antuitrin-S and was apparently of the opinion that one preparation was as effective as the other. The same material has been used successfully for years in the treatment of sterility in the female. As a matter of fact, antuitrin was used successfully in women long before antuitrin-S was made available. The dose of antuitrin should be ½ to 1 c.c. or more two or three times a week. Antuitrin-S should be given in doses of 1 c.c. or more two or three times a week. Males and females require about the same dosage and frequency of treatment.

This treatment not only overcomes sterility in the female, but many times corrects frigidity also. As a matter of fact, one should explain to female patients undergoing treatment for hypopituitarism of the anterior lobe that they may expect some increase in sexual vigor.

Prostatic Hypertrophy. This condition is connected with and in some way dependent upon a decline of the sex hormones or failure of utilization of the sex hormones of the anterior lobe, Lower and McCullagh[2] report a considerable series of cases benefited by orchic substance by mouth. They used large doses, the equivalent of approximately 900 grains of the fresh gland daily. The male sex hormone is said to be useful in the same condition. This should be given as described on page 6. Undoubtedly every victim of prostatic hypertrophy, unless he is faced with an emergency operation, should be given the benefit of endocrine therapy before he is subjected to any surgical procedure.

In the treatment of **menstrual disorders**—amenorrhea, menorrhagia or pathological basis can be found explain fully the existence of these states and consequently no rational specific therapy can be advocated. However, when a practitioner is confronted by one of these conditions there are certain general rules which he can follow: (1) The general health and physical status should be carefully checked and defects corrected. (2) Endocrine dycrasias, such as hypothyroidism, whether or not directly related to the menstrual function, should receive adequate treatment. These measures alone will correct many cases of amenorrhea, a few of dysmenorrhea and still fewer of menorrhagia.

The hormone preparations most directly applicable to these conditions are the estrogenic and the gonadotrophic ones. So far as the gonadotropic preparations are concerned they should be given in small doses (25 to 50 units) two or three times a week in the treatment of amenorrhea and scanty painful periods. For cases of so-called functional uterine bleeding they should be given in larger doses (100 units and upward) daily until the bleeding is controlled by any reasonable dosage of the preparations. For amenorrhea oftener than not one will want to use both estrogens and the gonadotropic preparations. For younger women small doses of estrogens are employed, 2000 units two or three times a week. For older women this dosage may be increased many times. In general, however, where very large doses (10,000 or more units) are employed per dose, the menstrual periods do not continue long after the discontinuance of treatment. The best method of giving these preparations has not been determined. They may be given alternate weeks or alternate days

Lately progestin has been suggested as treatment for dysmenorrhea. It is said to be effective because it reduces the frequency and severity of uterine contractions.[3] Injections of 1/25 to 1/5 internation unit are said to be effective many times in the treatment of menorrhagia.[4] This preparation has also been found effective in the treatment of habitual or threatened abortion[5]. In this condition it also probably acts by quieting uterine contractions.

When none of these measures are effective in the treatment of any of these menstrual disorders, the use of small so-called stimulating doses of x-ray applied to the pituitary or ovary or both are quite effective. The factors used and the frequency of treatment vary with different workers. Our own practice in the treatment of younger women is to use about 50 R units per area treated, and to repeat treatment not oftener than every 30 days and give no more than three treatments without a rest period of at least 90 days. In the treatment of menorrhagia larger doses are usually necessary, but one should carefully interrogate his roentgenologist to be sure that castration doses are not employed unless treatment is being given to a woman near the menopause when such a procedure may be advisable.

Endocrine Treatment of Non-Endocrine Conditions. The most striking advance along this line has been the use of insulin in the treatment of mental disorders, particularly dementia praecox. A great many patients have been restored to more nearly normal status by the use of hypoglycemic shock produced by insulin. This treatment can be carried out only in a hospital or an institution devoted to the treatment of mental disorders where very careful supervision can be maintained over the patient. It seems likely that there was some over-enthusiasm shortly after the introduction of this therapy and that the percentage of cures will not be as large as was expected. That is, patients that are released from institutions later relapse to their former state.

In the past few years Werner et al.[6] have used theelin in the treatment of involutional melancholia. They have come to regard it as specific in this condition. The apparent recovery rate in their series is given as 92 per cent. It is their practice to give 30,000 to 40,000 international units during the first month and after that they say the dosage is reduced "to conform to the needs of the individual patient." At the Elgin State Hospital we have not been able to duplicate their experience. Something over a dozen cases of involutional melancholia were selected and given various doses of estrogenic preparations, usually amniotin. The dosage varied from 2000 units three times a week up to more than 200,000 units per month. So far we have noted no improvement in any of these patients.

However, some years ago we treated at this institution a number of cases whose endocrine disorder was diagnosed as primary ovarian insufficiency. Of these 17 patients, 9 were discharged as recovered and 1 was paroled. There is no reasonable doubt that patients suffering from mental disorders and hypogonadism have a better chance of recovery than do patients similarly afflicted without hypogonadism. The state would be making a valuable investment of the taxpayers' money if an appropriation were made to carry on research as to the relationship between mental disorders and endocrinopathies, especially hypogonadism.

Gonorrheal vaginitis in children is best treated by one of the estrogenic preparations. It is claimed that the most efficacious method of administration is by means of vaginal suppositories, one containing 75 units to be used each night[7].

Many years ago epinephrine was recommended in the treatment of malaria. Recently this has been revived and a small series reported from Italy[8] in which patients suffering from chronic malarial splenomegaly were greatly benefited by intravenous injections of progressive doses of from 0.01 to 0.05 mg. The injections were given daily up to a total of thirty.

The changing attitude of the profession is illustrated by obesity, diabetes and hypertension. The old idea that obesity is due entirely to over-eating is gradually being abandoned as it is more generally recognized that in many instances it is due to or at least accompanied by some endocrine disturbance, most often the thyroid and pituitary being deficient. While no case can be effectively treated without some reduction in the caloric intake, many cases are more efficiently treated if to this reduction in diet we add thyroid to the point of tolerance and posterior lobe extract in such doses as the patient can tolerate, and repeat the injection two or three times a week. If there is any evidence of anterior lobe deficiency, an extract of this lobe should also be given.

The physiologists have for the most part abandoned the idea that the pancreas alone controls carbohydrate metabolism as they have shown that the pituitary and adrenals also play a large part in the handling of this important foodstuff. As a matter of fact, there is more evidence that some functional abnormality of these two glands is responsible for diabetes than that it is due to pancreatic insufficiency. There is also a large mass of evidence that essential hypertension is closely related to diabetes mellitus and many times arises from a disturbance of the same two structures. Following this line of thought we have for the past five years treated these two syndromes at the Illinois Central Hospital by low doses of irradiation of the pituitary and adrenals.

Table 2 shows the studies in glucose tolerance that were made in a series of hypertension cases.

Table 2

Blood sugar rose to		Glycosuria
Over 200 mg.	64	24
170-200 mg.	39	11
Less than 170 mg.	55	3
	—	—
	158	38

It will be noted that in only 55 cases, or 34.8 per cent, was the sugar curve within normal limits.

Table 3 shows the B. M. R. determinations.

Table 3

Lower than 5%	45
-5 to plus 10%	56
Over plus 10%	49
	150

Table 4 shows the results achieved by treatment.

Table 4

Hypertension

Adequately treated and followed,			252
Improved	174	69.0%	
Relapsed	27	10.7%	
Remaining improved	147	58.3%	
Unimproved	78	30.9%	
Insufficient treatment			52
Can't be followed			27
			—
			331

It should be borne in mind that the dosage of x-ray was very small. The following factors have been most successful in our hands: 120 kilovolts, 2 mm. aluminum filter, 3 milliamperes, 50 cm. skin target distance, 10x10 cm. portal for each side of the pituitary and and 15x15 cm. common portal for the adrenals, 5 minutes, 50 R units per area treated. This dosage is smaller than that used by the dermatologists in the treatment of skin disorders. Both sides of the pituitary and the adrenals are treated on the same day.

Treatments are seldom repeated at less than one-week intervals—and if that frequently, not more than six are given. At the end of that time the patient is directed to wait at least one month for further treatment. If there is a favorable response to one or more treatments, as indicated by relief of symptoms and a satisfactory fall in blood pressure, no further treatment is given until it is evident, from a number of observations at weekly intervals, that no further fall in blood pressure is to be expected, or until the blood pressure begins to rise. Some patients have needed only two or three treatments in a year.

Treatment should not be given at too frequent intervals. To do so invalidates some of the good results seen to follow previous treatments. I have seen failures follow too frequent treatments, in cases where there was every reason to expect the patients to experience good results from this method of therapy.

Treatment has never been followed by any damage to the pituitary, adrenals or adjacent structures. There have been no burns and no loss of hair. In one case subjected to much heavier dosage than the one given above, postmortem examination showed that neither pituitary, nor adjacent brain structures, nor the adrenals had experienced any damage. Biopsies of the adrenals in two other cases subjected to heavy doses showed not the slightest sign of x-ray damage. Men who discuss the danger of this procedure are either ignorant of the dosage used or of the effects of such small doses. Doses large enough to produce damage have no favorable effect on either symptoms or blood pressure. This is not a new principle in medicine. Many drugs are quite valuable in small doses but dangerous or toxic in large ones. The same can be said of vaccines.

Relief of symptoms, such as headache, tinnitus, vertigo, precordial distress, nervous tension and irritability, has been noted in about 90 per cent of the cases. This occurred even when the blood pressure was wholly unaffected. In 69 per cent of the cases adequately treated and followed a substantial reduction in blood pressure occurred. In 15.5 per cent of these patients the blood pressure later returned to its original level and was uninfluenced by further x-ray treatment. In most of these cases there was no recurrence of symptoms. This leaves 58.3 per cent in which the blood pressure continues to be adequately controlled by this form of treatment. Patients subjected to irradiation in this way are much more sensitive to the nitrites and sulphocyanates than they were before x-ray treatment, even if the blood pressure is not controlled by the x-ray.

It is hardly necessary to say that these patients had been observed in most cases for several years before x-ray treatment was undertaken. Many of them were employees of the Illinois Central Railroad and had been observed in the Hospital Department for a long time. Others were private cases in which the diagnosis was adequately supported.

There is, of course, no mortality associated with this treatment. No hospitalization is necessary and except when the patient is away from home, he does not need to lose any time from his usual business employment as treatment is not followed by any unpleasant reaction.

Table 5 shows the experience of other men who have used this form of treatment.

Table 5

	Cases	Cases Improved	%
Martin	100	80	
Baker	40	30	
McGuffin	40	30	
Boswell	12	11	
Finch	12	9	
Konantz	6	3	
Parkhurst	5	3	
Hadley	4	4	
Miscellaneous	56	47	
	—	—	
	275	217	78.9%

Table 6 shows our experience in the treatment of patients who had both hypertension and diabetes.

Table 6

Improved as to both conditions	12	33.3%
Improved as to hypertension only	8	23.5%
Improved as to diabetes only	4	11.7%
Improved but relapsed	2	5.8%
Unimproved	1	2.9%
Insufficient treatment	6	17.9%
Can't be followed	1	2.9%
	—	
	34	

A few illustrative case histories follow:

Mr. S. C., a lawyer, age 52, referred by Dr. Don Smith of Hope, Arkansas, December 21, 1936. Complaints: diabetes discovered in May 1936, at which time he had a severe acidosis; hypertension for 4 or 5 years; no symptoms except that the left leg was cold and inclined to drag since a "spell" in May of 1936. Diet C. 90, P. 60, F. 90, insulin 22 units. Blood pressure 170/90; blood sugar after breakfast and insulin 94.7 mg.; weight 155 pounds. The general examination was otherwise not significant. The urine, blood count and blood chemistry were normal. One x-ray treatment to the pituitary and adrenals was given on December 22, 1936. He took his last dose of insulin December 24, 1936 and 40 grams of carbohydrate were added to his diet. His blood sugar readings afterward were as follows:

12/24/36	74.3 mg.
12/26/36	151.1 mg.
12/28/36	141.0 mg.
12/29/36	119.0 mg.
	99.0 mg.
12/30/36	87.7 mg.
12/31/36	84.3 mg.
1/ 2/37	71.1 mg.

His blood pressure fell to 120/70 on December 24 and rose to 150-160/95-105 on January 2, 1937. He was seen again December 13, 1937 when his blood pressure was 165/95 left, 180/105 right. He was given another x-ray treatment. December 18 his blood pressure was left 160-145/80, right 160-150/85-90; blood sugar 115 mg.; weight 186 pounds.

Mrs. T. D., age 49, referred by Dr. David Musselman on February 28, 1936 with the statement that she had known of her hypertension for more than three years. She was easily fatigued, had frequent headaches and heart consciousness and was sensitive to cold. Blood pressure right 195/100, left 210/100. B. M. R. normal; blood count, chemistry, urinalysis and renal function test were all within normal limits. March 6, 1936 she was given an x-ray treatment. March 13, 1936 blood pressure was left 130/82, right 148/90. March 27 blood pressure had risen to 185/100 and she was given another x-ray treatment. Following this the pressure gradually declined and on April 10 it was 145/80 in both arms and she was symptom free. Her blood pressure remained at nearly normal levels until March 5, 1937 when it rose to 165-180/95 left, 165-175/95 right. Treatment was repeated. Blood pressure fell gradually and November 26, 1937 it was 130/80 left and 140/85 right.

Rev. W. B., age 67, was first seen on April 2, 1935 with the statement that he had known of his hypertension for the past five years. There were few symptoms except precordial distress. Blood pressure was 190/108. The arteries were somewhat tortuous and moderately hardened. Otherwise the general examination was largely negative. Under amyl nitrite his blood pressure dropped to 150-165/95. After a second treatment it continued to drop and on September 14, 1935 it was 145/95 left, 155/95 right. Because of slight headache he was given another treatment October 7, 1935. November 30, 1935 his blood pressure was 170/90 and he was given one x-ray treatment. His blood pressure fell to 150/85 but rose to 180/90 on the 14th when he was given another treatment. His blood pressure then remained between 145/90 and 160/90 until February 5, 1938, when it was left 160/90, right 165-170/90. He was given another x-ray treatment after which the blood pressure promptly dropped to 145/80.

Mrs. M., age 59, had a subtotal thyroidectomy for Graves' disease in 1928. There was a recurrence of symptoms for which a second operation was done in 1929. A third operation was being urged on her in 1934 when she first came under my observation. She presented the usual symptoms of Graves' disease. Her B. M. R. was plus 56 per cent. She had considerable thyroid tissue including a mass about 2.5 cm. in diameter in the right lobe. Her heart had undergone some damage. It was enlarged and fibrillating and a systolic murmur was heard over the precordial region. She had some precordial pain radiating down the arms and was quite short of breath on exertion. Her blood pressure was 205/75. Treatment was undertaken for the hypertension by irradiation of the pituitary and adrenal areas. After six treatments at weekly intervals her blood pressure was 135/85. The B. M. R. had fallen to plus 18 per cent. Seventeen months later the blood pressure was right 165/90, left 155/90; the B. M. R. plus 14 per cent. The mass of thyroid tissue seemed unchanged. The blood pressure and signs of hyperthyroidism were controlled by two x-ray treatments to the pituitary and adrenals—not the thyroid—in 1936 and two more during 1937.

In the treatment of diabetes without hypertension the results have been far less striking than where the condition was associated with hypertension. In at least a third of the cases the x-ray was apparently without any effect; in another third there was slight increase in carbohydrate tolerance and some relief of symptoms; in another third there was relief of symptoms and improvement in carbohydrate tolerance, amounting in some instances to liberating the patient from the use of insulin and the liberalization of his diet. This has not occurred where the insulin requirement has been above 35 units per day.

In this connection it is interesting to note that Pincussen[9] noted improvement in carbohydrate metabolism of animals when they were exposed to ultra-violet and visible rays. In summary he has the following to say:

"1. Carbohydrate metabolism is greatly influenced by ultra-violet and visible rays. The most obvious symptom is a lowering of the blood sugar.

"2. Experiments on animals show that while the blood sugar decreases, the glycogen content of the liver and muscle increases and the lactic acid drops, so that the quotient carbohydrate: lactic acid increases. Accordingly the action of rays is similar to that of insulin. The carbohydrate that disappeared from the blood is stored as glycogen in the tissues."

Summary. From the clinician's point of view a survey of endocrine progress shows that its frontiers are being gradually extended. Endocrine dyscrasias such as Froehlich's syndrome and some cases—probably an average of about 50 per cent—of cryptorchidism can be successfully treated by endocrine preparations. The endocrine nature of most cases of obesity is being more generally recognized and treatment planned accordingly. The inadequacy of the pancreatic theory of diabetes is being recognized so that the entire theory will undoubtedly ere long be discarded and replaced with a better conception of this distressing syndrome which should recognize the pancreas as only one of the factors involved in carbohydrate metabolism. Low dosage irradiation of the pituitary and adrenals is suggested as an addition to our present inadequate methods of treatment for essential hypertension. Symptomatic relief occurs in about 90 per cent, and both symptoms and blood pressure are controlled in 58.3 per cent of the cases. Those cases not controlled by irradiation are more sensitive to the effects of sulphocyanates and vasodilators. In conclusion I can do no better than to quote Harrison[10], who makes the following statement:

"Irradiation will help to avoid unnecessary operations on the sympathetic nervous system and operative interference should not be attempted until the effect of irradiation has been first definitely established. It is highly probable that the operation will prove ineffectual if irradiation has failed to secure any improvement."

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Chronic Non-Calculous Cholecystitis

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INTRODUCTION

THE SYNDROME of the stoneless gall bladder has been accused of causing more symptoms and less frequently proved to be the cause than perhaps any other condition of the body. This fact, plus relatively poor prognosis as far as relief from symptoms are concerned, has caused it to attract an unusual amount of attention. We have chosen to discuss the subject under the following major headings: Physiology, Bacteriology, Pathology, Pharmacology, Laboratory Procedures, Clinical Considerations and Therapy. The anatomy of the gall bladder and the biliary tract is not discussed; however, one point along this line should be mentioned, i. e., the relation of various slight but definite anomalies of the organ and its ducts to the symptoms referred to it. Could it not be that these slight variations may be sufficient to interfere with the proper drainage of the organ, favor infection, etc.? We have found no statement to this effect in the literature, but to us it at least seems to be a possibility.

PHYSIOLOGY

While the gall bladder is absent in a number of animals and may be successfully removed in those possessing one, it is by no means a superfluous organ.

Five functions have been assigned to the gall bladder: (1, 2, 3, 4, 5,).

1. It serves as a reservoir for the storage of bile; this is perhaps the most widely accepted and most firmly established function.
2. It is an organ for the reabsorption of excess bile. Boyd[5] after describing and discussing the normal gall bladder as seen under the dissecting microscope declares: "Such highly specialized structure can be for one purpose only; and that purpose is absorption." In fact, the gall bladder concentrates the bile four to ten times.
3. It acts as an excretory and secretory organ adding certain toxic substances and having to do with the metabolism of cholesterol, mucin, etc.
4. It regulates the flow of bile into the duodenum.
5. It acts as a compression chamber to regulate the intraductal pressure.

EMPTYING MECHANISM

Concerning this Graham et al[2] states that its emptying probably is a complexed mechanism involving the organ itself much as the urinary bladder empties and also is subject to changes in the tonus and pressure of the duct system. Wiggers[1] assigns three mechanisms of emptying: a. By a physical process. In spite of Winklestein and Aschner's[6] enthusiasm for this, it is not assigned a very important part by most writers. b. It is the results of relaxation of the sphincter of Oddi. Probably no other statement in the whole physiology of the gall bladder has provoked more controversy. There are some who even doubt the existence of such a structure; however, since the work of Schwegler and Boyden[7], it has been established as an entity, and may be demonstrated in most human beings. Graham et al believe it is present in man and functions as a sphincter. Ivy and his co-workers assign to it at least two functions: It is necessary for the filling of the gall bladder, and it prevents the regurgitation of the duodenal succus entericus into the bile ducts. Meltzer[9] has postulated a reciprocal mechanism between the gall bladder and the sphincter, whereby when the gall bladder contracts the sphincter relaxes; this he believes is because of cross reciprocal innervation. Ivy and his colleagues[8a & b] agree with the first but are not positive that it is due to a nervous mechanism. Graham et al[2] believe that such a system may exist. Wiggers[1] neither confirms nor denies this, but asserts that such a set up has not been conclusively demonstrated. Evidence has accumulated showing that the tonus of the duodenum is as important as the tonus of the sphincter of Oddi in regulating the flow of bile from the bile ducts[2, 8a & b, 10]. c. The last factor in the evacuation of the gall bladder is concerned with the motor activity of the gall bladder itself, which results from the contraction of its walls and the normal recoil of the gall bladder walls when distended. Burget stresses this latter factor. Westpahl, quoted by Ivy and Bergh[8b] stresses two major types of motor dysfunction:

"I. Hyperkinetic:

a. Hypermotile: Increase motility of the gall bladder and ampulla with rapid emptying.

b. Hypertonic: Contraction of the gall bladder against spasm of the sphincter with spastic distention and colicky pain.

II. Atonic:

Relaxation or atony of the gall bladder with spasm of the sphincter of papilla causing atonic distention of the gall bladder with mild continuous heavy aching."

The importance of this will be considered later.

In summary the evacuation of the gall bladder includes three and possibly other as yet undiscovered factors: 1. Physical emptying mechanism. 2. Concerns the tonus of the sphincter of Oddi and the duodenum, and lastly the contraction and recoil of the gall bladder walls.

CHOLECYSTOKININ

The hormone cholecystokinin is by far the most powerful stimulus in contracting the gall bladder that has been studied thus far. This substance has been extracted from the duodenal mucosa and when injected intravenously causes a marked contraction of the gall bladder. It is formed only in an acid medium and its chief excitants are fats and acids, especially egg yolk and cream. By its action it causes the gall bladder to contract, and the bile flows into the duodenum; this tends to alkalize the duodenal content thus tending to stop the formation of the hormone; thus a cycle is established[8b].

INNERVATION

The innervation of the gall bladder is complex and as yet is poorly understood. Graham et al[2] found that the gall bladder functioned normally after sectioning the vagi and splanchnics. They found that stimulation of the vagi did not influence the emptying of the gall bladder, but did find that after cutting the left vagus in the neck there was a definite delay in the appearance and disappearance of the gall bladder shadow as shown by cholecystography. They believe that the gall bladder probably acts by its intrinsic nerves as do the intestines. Ivy and Bergh[8b] report that stimulation of nerves has little if any effect on the gall bladder.

Thus the physiology of the gall bladder is a complex mechanism, and while a great deal is known about it, it is still imperfectly understood; and much work remains to be done.

BACTERIOLOGY

Bacteria of practically every type have been reported as being cultured from the gall bladder wall or bile. Perhaps the various strains of streptococcus have been accused most often; at any rate, most authorities seem to believe it plays a more important role than any other organism. Rosenow[12a] perhaps was the first to emphasize the importance of culturing the wall of the gall bladder and not merely the bile. He was also the first to propound the theory of elective localization in this regard. This theory has practically been abandoned by the leading bacteriologists[12b]. Among the other bacteria cultured have been staphylococci, B. Welchii, B. Coli, B. Typhosus[2]. Andrews[13] raises the question of the importance of bacteria in the etiology of chronic cholecystitis; he states that he has never seen a true empyema of the gall bladder, and that further he has not been able by injecting emulsions of various micro-organisms into the gall bladder to produce a cholecystitis except with a single strain of streptococcus. He favors a chemical and metabolic origin of the disease and mentions Mann's work of injecting intravenous Dakin's solution with the production of a cholecystitis; also Wolfers' pancreatic juice, the allergic gall bladder, and his own work with gastric and intestinal juices. However, in nullification of Andrew's experiment with bacteria, we find that it has been repeatedly demonstrated that the mere presence of organisms in the lumen of the gall bladder constituted invasion, but not infection; but in order to infect the gall bladder by this route it is necessary to: (1) damage the gall bladder wall, (2) interfere with its blood supply, or (3) block its duct[2].

It can thus be seen that although bacteria of many types have been described, and that although they probably play a part in the production of chronic cholecystitis, just what place they occupy in this connection cannot be definitely stated at present.

PATHOLOGY

Just what constitutes a pathological non-calculous gall bladder is not absolutely agreed upon by pathologists[14]. Andrews[13] proclaims the profound edema is of first importance; he found the lymphatics and blood vessels dilated, and a moderate infiltration of mononuclear cells. Only in late stages were polynuclear cells seen. The mucosa is surprisingly intact, and almost normal. The muscularis is thickened, and the serosa markedly so. Graham, Cole, etc.,[2] described a somewhat similar picture, stating at times the fibrosis is so profound that it replaces most of the elastic and muscular tissue. Boyd[15] remarks on Moynihan's description of subserosal fat, stating that it is often present; however, he states that he has seen cases with marked increase in fat, yet there were no gall bladder symptoms. Mentzer[16] reported microscopic evidence of chronic cholecystitis in sixty-six per cent of necropsies at the Mayo Clinic; yet only eight per cent had a preautopsy diagnosis, leaving the remainder as asymptomic gall bladders. Both Stanton[17] and Mackey[18] were unable to correlate the pathological reports of gall bladders removed at operation with the clinical syndrome. Mackey[18] comments that microscopic changes to be of any significance must be fairly gross, while Wilkinson[19] raises the question as to whether the mild infiltration of the gall bladder walls with leukocytes constitutes actual disease or is really the natural changes occurring as result of the normal metabolic process of living. At any rate, he does not believe that a mere pathological report of chronic cholecystitis is a justification for cholecystectomy. In short, we must look elsewhere other than the pathologist report of chronic cholecystitis for a cause of the noncalculous gall bladder syndrome. Possibly, as has been suggested many times, it lies in faulty physiology rather than pathology[20]. For as Boyd[15] and Kunath[20] remark, many gall bladders at autopsy are found to be markedly diseased. During life there were no symptoms, while the converse is also true, for many histologically normal gall bladders removed at operation cause a relief of symptoms.

The so-called "strawberry" gall bladder has not been considered, for: first, the prevailing opinion is against its being a pathological condition, i. e., it is not believed to cause symptoms,[17, 18, 20]; and secondly, if classified as a pathological entity, it probably is more closely related to the calculous gall bladder than the stoneless one.

PHARMACOLOGY

The action of various drugs on the gall bladder and its ducts and the sphincter have been widely studied and much accurate knowledge is at hand. Walters and his co-workers[21] at the Mayo Clinic have reported considerable work of this nature. Patients who had had exploratory operations on the common bile duct and who had T-tubes placed in this duct for prolonged drainage of the biliary tract were utilized. A non-irritating substance which would give a shadow on x-ray was injected into the biliary tract via the T-tube. Then under the fluoroscope and by roentgen films they studied the changes in the size of the biliary tract after giving certain drugs. Also, by using a water manometer which was connected to the T-tube they studied the various changes in pressure that occurred after using various products.

We shall first take up the action of these substances on the sphincter of Oddi. Kitakohi[22] found that preparations that stimulated the parasympathetic nerves increased the tonus of the sphincter both in vivo and in vitro. This work has been duplicated by Shi[23]. We shall take up each drug individually:

1. Morphine.—Causes a contraction of the lower part of the common duct and its sphincter[21, 22, 23]. All authorities agree on this, but Ivy and Bergh[8b] believe that this effect is due more to the increase in tonus of the duodenum than to the contracting sphincter. This effect is rather prolonged, and may last two hours or more after administration.

2. Nitrites.—The nitrites have a relaxing effect on the sphincter even after morphine; amyl nitrite acts more promptly but glyceryl trinitrite has the more prolonged effect; however, after morphine the relaxation following the nitrites later gives way to contraction as the action of morphine is more prolonged and it exerts its effect after the nitrite effect has worn off. Best, in discussing Walters' et al's paper, stated that at operation the sphincter contracted, and after atropine had failed he was able to relax the structure with glyceryl trinitrite[21].

3. Theophylline with ethylediamine when given in four grain doses intravenously produced a relaxation similar to the nitrites[21].

4. Atropine.—Kitatohi[22], Shi[23], Ivy and Bergh[8b] and Ivy[8a] all report that this drug relaxes the sphincter. Walters et al[21] were not able to elicit this effect with a dose of one-seventy-fifth grain following an injection of

morphine. Ivy in discussing this paper suggests that a dose of one-sixtieth grain might have gotten response.

5. Scopolamine hydrobromide.—Shi[23], and Kitatohi[22] report a relaxing effect from this drug; Walters et al[21] after morphine found that the sphincter failed to relax after a dose of 1/100 grain.

6. Ephedrine, caffeine, sodium phenobarbital, histamine, hypodermically, and alcohol per os, and calcium chloride intravenously all failed to cause a relaxation after morphine[21].

7. Epinephrine and ergotamine tartrate gave little or no response[21, 22, 23].

8. Nicotine contracts the sphincter[22, 23].

9. The parasympathicomimetic drugs—pilocarpine· physostigmine· and acetylcholine and muscarine—are reported by Shi[23], Kitakoji[22] and Ivy and Bergh[8b] as contractants of the sphincter; following morphine, Walters et al[21] failed to elicit any change in the intrabiliary pressure with these drugs[21].

10. Papaverine hydrochloride.—When placed in the duodenum is reported by Blass[24] to cause a relaxation of the sphincter. Walters et al[21] got no response with this drug following morphine.

11. Magnesium sulphate, magnesium oxide, and sodium sulphate all relax the sphincter when placed in the duodenum[8b].

12. Spinal anesthesia probably relaxes the sphincter. (Best and Hicken[25]).

13. Posterior pituitrin relaxes the sphincter[23].

14. Bile salts (decholin) intravenous relaxes the sphincter[8a].

On the gall bladder itself Ivy and Bergh[8a] mention: that atropine relaxes it but does not abolish the action of cholecystokinin; morphine increases the tonus rhythm; pilocarpine usually causes an expulsion of bile from the gall bladder into the ducts, but because of its contracting effect on the sphincter and duodenum, it fails to cause an evacuation of the gall bladder; and, lastly, pituitrin after a latent phase of ten to fifteen minutes causes the gall bladder to contract and empties it of up to fifty per cent of its content; however, this action is not as powerful as that of cholecystokinin.

LABORATORY PROCEDURES

Numerous laboratory methods to test the function of the gall bladder have been promulgated, but only two have proved to be of real value, viz: the cholecystogram and the Lyon-Meltzer duodenal drainage procedure. We shall therefore consider only these two.

A. Cholecystography:

This procedure developed by Graham, Cole and others of the St. Louis group, has received a wider trial and with more frequent confirmation than any other one diagnostic attempt. The technique of cholecystography is too involved for discussion. We, therefore, must content ourselves with a discussion of its place in the diagnosis of chronic non-calculous cholecystitis, and in the interpretation of the results. Graham and his co-workers[2] are very enthusiastic about the cholecystogram; they report it as being over ninety-seven per cent diagnostic, and have collected figures from a large series to one hundred per cent. Mackey[14] in 1934 found that in seventy-six gall bladders removed at operation with minimal pathological lesions, only nine gave normal roentgenographic studies while seven gave no shadow at all; while out of fifty-eight cases of chronic catarrhal cholecystitis six gave normal films and only fourteen showed no shadow at all. Further, out of ten cases giving normal cholecystographic response five were completely cured of their gall bladder symptoms after cholecystectomy; while in twenty-two cases giving no shadow only six were well after surgery. He, therefore, concludes that an abnormal cholecystogram is not sufficient evidence for removal of the gall bladder. Rose[26] in the same year collected the work of twenty authors with a total of 39,280 cases, 5,983 of which went to surgery, and added 911 more cases of his own of which 295 went to operation; from this he concluded that cholecystography is dependable as a diagnostic agent in ninety-eight per cent of the cases. Meranze et al[27] found that the test was correct in 82.7% of fifty-eight cases. Kunath[20] reported the x-ray findings accurate in over 90% of the cases; but that of twelve cases giving normal shadows 41.7% were cured with surgery and 33.3% were improved; further, of fifty-one cases not visualized three gall bladders were normal and fourteen nearly so on pathological examination. Piersol[28] believes that cholecystogram furnishes more accurate information about the gall bladder than any other single diagnostic procedure, although it is not infallible. To Musser[29] the x-ray is a very dependable diagnostic method, but it is by no means pathognomonic. Jenkinson[30] believes that every patient should have at least two abnormal cholecystograms before surgery is indicated.

We therefore may conclude that every patient who has gall bladder symptoms should have a cholecystogram, but that roentgenography is not infallible.

B. Lyon-Meltzer Biliary Drainage

Based on Meltzer's theory of reciprocal activity between the gall bladder and the common duct sphincter (see section on Physiology), Lyon[31] has described a method of diagnosis and therapy for gall bladder disease. It is known that magnesium sulphate, when introduced into the duodenum in the vicinity of the ampulla of Vater, causes the duodenal wall to relax and with it the sphincter of Oddi.

With this working hypothesis Lyon has devised a plan of instilling from 50 to 100 c.c. of a 33% solution of magnesium sulphate into the duodenum and withdrawing samples of bile through the tube for examination. The first specimen is known as "A" bile and is supposedly from the duodenum and common duct; normally it is a light golden-yellow and unless emulsified by the escape of acid gastric juice it is transparent. The second bile is "B" bile and represents bile from the gall bladder and has a greenish-brown color, and is usually about 75 c.c. in amount. Finally, bile "C" is obtained, which is freshly secreted liver bile; it is lemon-yellow color, and continues to flow intermittently as long as the sphincter is relaxed. The transition in these three types of bile is surprisingly abrupt[2].

To be of diagnostic value this test and examination must be done by an expert technician. When carried out with skill and intelligence it is possible to recognize many types of gall bladder affections. The microscopic examination is of first rate importance, but some information is obtained by gross examination. Thus abnormally concentrated bile indicates biliary stasis, while absence of concentration may be noted in cystic duct obstruction, disease of the gall bladder wall, etc.; while, further, if the bile is very dilute an hepatic disorder should be considered[32]. In the diseased gall bladder microscopic examination of the bile may reveal the presence of various bacteria, cholesterol and calcium crystals, and bilirubinate pigment in quantity to be significant [28, 32, 29, 33, 34]; even tumor cells have been found[29].

We thus have the Lyon-Meltzer Biliary Drainage method, a valuable adjunct to the cholecystogram and clinical findings, in our effort to make an accurate diagnosis.

The symptoms of chronic non-calculous gall bladder disease readily resolves itself into three main groups[28]:

1. Those who have definite biliary colic as the principle complaint. There may or may not be a history of previous gall bladder disease. The attack is exactly like that of a gallstone colic, yet if the patient goes to operation no stone is found. The etiology of this attack is not known; Lyon and Swalm (quoted by Piersol[28]) have called attention to cystic duct obstruction due to catarrhal inflammation. Another possibility is a plug of mucous in the biliary tract. Then we have Westphal's hyperkinetic hypertonic gall bladder, described under the section of physiology and which Ivy and his colleagues[8a & b] stress. Here we have the contraction of the gall bladder against a spastic sphincter with distention and colicky pains.

2. Those cases with right upper quadrant or epigastric pain or discomfort almost constantly present. There is usually an associated tenderness or even some rigidity of this area. Frequently varying degrees of dyspepsia are present. We must consider Westphal's atonic gall bladder here[8a & b].

3. This last class containing by far the largest number includes those without a history of a true biliary colic and with little or no pain, where tenderness is inconspicious and true rigidity almost never found. Here the patient's complaint is described by that vague word "dyspepsia" which includes such findings as: bloating, flatulence, nausea (occasionally vomiting), food selection (allergy?), (the disturbance being precipated by such foods as fats, fruit, cabbage, etc.); belching, etc. It is this last group where the diagnosis is the most difficult and therapy the least effective.

Various combinations of these three groups may and usually do exist; further, a patient may be in one class at present only to shift over to another later. However, by far the largest, least understood, hardest for diagnosis, and responding poorest to treatment is found in the third classification. In any of these, varying degrees of jaundice may be present.

In the differential diagnosis one must bear in mind 'the various structures that are in the region of the gall bladder. Space does not permit a detail discussion of this, and we must content ourselves with merely listing the various conditions to be considered. Paulson[10] gives the following to be ruled out:

tabes dorsalis, perforating peptic ulcer, renal calculi, hydronephrosis, root pains of spinal and vertebral lesions, and the various types of jaundice. Graham and Mackey[14] list various conditions of the spine especially osteoarthritis, chronic constipation, surgical diseases of the right kidney, and urinary tract and duodenal ulcer. Kunath[20] calls attention to tuberculous processes of the eleventh and twelfth dorsal vertebrae, pancreatic and gastric lesions, diseases of the right kidney, syphilitic cirrhosis, chronic intestinal obstruction, hypertrophic arthritis of the spine, intercostal neuralgia, neurosis, and irritable gastro-intestinal tract. Mention is also made of the frequent finding of "violin string" adhesions between the liver and the anterior parietal peritoneum following g.c. peritonitis. In nineteen of Stanton's[17] cases subsequent histories and examinations revealed that the gall bladder was at fault. Of these seven were cardiac cases, two having acute pericarditis, one each of angina pectoris, paroxysmal tachycardia, and thyroid heart, and two cases of myocarditis. He also found that two patients were victims of hysteria, one patient failed to get relief from cholecystectomy and subsequently developed carcinoma of the head of the pancreas, two had luetic livers, three had partial intestinal obstruction, and three others had peptic ulcers. Wilkerson[19] puts considerable stress on the differential diagnosis between chronic cholecystitis and irritable colon, but gives no diagnostic criteria for differentiating them. All in all, we must agree with Wilkerson in that there is no absolute diagnostic criterion for gall bladder disease.

THERAPY

The successful handling of chronic noncalculous cholecystitis is one of the most difficult problems of all medicine. We shall consider its therapeusis under three main headings, viz: (1) prophylaxis, (2) surgical indications and (3) medical management.

1. Prophylaxis:

Practically nothing is known about the prevention of gall bladder disease. Ivy and Bergh[8b] have suggested the daily intake of adequate fat to aid in the proper evacuation of the gall bladder, especially antepartem and in the atonic symptomless gall bladder.

2. Surgical Indications:

We have labeled this heading surgical indications rather than surgical treatment, for we feel that a consideration of technique is out of place here. About 1923 Alvarez and his colleagues[35] asserted that the cholecystectomy should be performed early in gall bladder disease. However, today most authorities do not agree with this; rather they believe and have found that the removal of the gall bladder late in the disease results in a higher percentage of cures than when surgery is resorted to early[10 & 18]. Assuming then that we have made a correct diagnosis of chronic stoneless cholecystitis, and decide to resort to surgery, on purely statistical evidence what prognosis may we give the patient? It was probably Judd and his coworkers who first emphasized that the indication par excellence for removal of the stoneless gall bladder is the history of a definite gall bladder colic. This statement is now agreed upon by most writers. Mackey[18] found that out of 47 such cases with a history of biliary colic 76% were well or improved by surgery, while only 67% of their cases without a biliary colic history were helped by cholecystectomy. Meranze et al[27] report that cholecystectomy definitely improved 67% of their cases that had had a previous colic, while 56% of their cases without this history were improved. Stanton[17] asserted that the only reliable guide in ordering surgery is the history of a definite colic. And so, we have found that almost all authorities agree that the best therapeutic results can be expected in cases with a biliary colic history. But even there unless the attacks are frequent and almost controllable the end results do not seem to justify the means, for cholecystectomy is a formidable operation carrying a mortality in these cases of from 0.5% to a high of 6%[14 &20]. Cholecystotomy is not considered, for it is agreed by all authorities that it is not the operation of choice, if the patient can be gotten into condition for cholecystectomy. It is certainly logical that the scaring would interfere with the proper function of the gall bladder. Hence, only in rare and emergency cases, as empyema of the gall bladder, is gall bladder drainage indicated.

3. Medical Management:

Every patient with chronic stoneless cholecystitis deserves careful medical supervision whether surgery is resorted to or not. In fact, we would probably not go far awry with the statement that all such patients deserved a fair and adequate trial of medical treatment before cholecystectomy is performed. Piersol[28] divides the therapy for these cases into three parts: (a) regulation of the diet, (b) disinfecting the bile and biliary tract, and (c) promoting biliary drainage. To this one should add psychotherapy and the various drugs needed to aid this phase.

There is no stereotype diet suitable for all cases. First, most such patients are obese; this should be overcome gradually, through diet and regulated exercise. If one concludes that the patient has a hypertonic sphincter, an excitant diet rich in eggs, milk, cream and others fats may bring relief[8b]. While in the atonic gall bladder fat also favors evacuation[8b]. However, it has been found that a majority of the patients have a definite intolerance for the high fat diet and do much better on the high carbohydrate low fat diet, but even here the gall bladder excitants should not be cut too low as that would favor stasis[8b, 28, 32]. Forcing fluids has been found helpful, especially six to eight ounces of hot water before each meal[28]. It would be well for all these patients to have a gastric analysis, for some are found to have a definite hyperacidity which should be corrected; while occasionally one notes a hypoacidity. Along this line, Twiss[32] has evidence that a modified Sippy diet is of value. One may conclude that this patient should have a bland easily assimilated diet, but that each one should be individualized.

Biliary disinfection is rather a hopeless task, but some results have been reported with the use of large doses of methenamine; doses of 50 to 100 grains with similar doses of sodium bicarbonate three times a day have been recommended[28].

Brown and Dolkart[36] assert that the rationale of treating chronic gall bladder disease is to promote drainage. This is aided first by an adequate supply of fat in the diet. The use of saline cathartics is a time honored treatment, and justly so. Of these, perhaps the most pleasant is the effervescent sodium phosphate, which may be taken in doses of one or two drams in hot water before breakfast. Calomel and other mercurical drugs are still used, but perhaps owe their value to psychotherapy more than to any special virtue over other laxatives, for their use is deeply imbedded in the mind of the laity. The use of Lyon-Meltzer duodenal drainage surely deserves a trial in such cases, for while many question its superiority over magnesium sulphate per os, none can deny its psychotherapeutic value. The best physiological stimulant to the flow of bile is bile salts themselves; of these Piersol[9] recommends decholin in four to eight grain doses two or three times daily for a month or longer. Brown and Dolkart[36] claim success with ketocholanic acid in doses of 11¼ grains daily. Piersol[28] also mentions cinchophen (which is too toxic to the liver for use) and salicylic acid as stimulants to the flow of bile.

In addition various antispasmotics of the belladonna series have their place. Also of first rate importance is psychotherapy; the patient must get adequate rest, preferably a short nap after each meal; he should be shown how his moods can and do effect his gall bladder, and taught that violent emotional upsets must be avoided. Possibly also to be remembered is the old stand-by: removal of foci of infection.

It is our belief that every patient with chronic non-calculous cholecystitis should have the benefit of proper medical management, before surgery is considered.

COMMENT

Non-calculous cholecystitis is one of the most difficult diagnoses in all medicine; its treatment is probably even more difficult. Probably the real future of the understanding of this disease is a more thorough physiological approach; certainly the finding of a pathological gall bladder does not always result in cure on removing it. There is no diagnostic criterion for the diagnosis of this disease. The more recent writers favor a full and thorough medical treatment before surgery is considered.

SUMMARY

The stoneless gall bladder is considered under the following headings: physiology, bacteriology, pathology, pharmacology, laboratory procedure, clinical considerations and therapy. It is concluded that every case deserves the benefit of medical therapy before cholecystectomy.

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Injuries of the Elbow*

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INJURY of the elbow inadequately treated may result in the awe inspiring deformity known as Volkman's ischemic contracture. This alone is enough to stimulate a desire for accurate diagnosis and adequate treatment. Therefore, I have selected this subject and wish to bring out some accepted elementary principles by discussing four common injuries. Since we still see individuals walking about the streets of any community with unsightly and disabling deformities of the elbow, it may not be amiss to limit this discussion to simple fractures and dislocations in children that lend themselves to the Jones treatment. These conditions can all be treated with a can of ether, some adhesive and bandage. Any doctor doing general practice has this equipment. The necessary piece of equipment for checking the final position he may not have is an x-ray machine. Now, however, every community has one or more x-ray apparati to which the attending doctor may have access.

First aid treatment of an elbow injury requires mention because splinting in extension as employed in many fractures of the upper extremity is usually not suitable to this condition. Straightening the forearm usually increases the pain and in turn the surgical shock. It is also likely to increase the dislocation of the fragments and permit added damage to the nerves, blood vessels and joint capsule. Therefore, the use of a sling fashioned from a three-cornered piece of cloth and holding the forearm in the position found is satisfactory first aid treatment. Fixation may be increased by snugly bandaging the elbow to the chest.

The subjective history is of very little help in diagnosis. That the patient fell one way or another throwing part or all of the body weight on the elbow is the story usually related. This has no value in differential diagnosis.

Physical examination, however, gives illuminating information. The better one knows the anatomy and physiology of the part the more clear will be the clinical picture gained.

The elbow is a hinge-joint composed of the articular surfaces of the lower extremity of the humerus, and the upper extremities of the radius and ulna connected by a capsule. The capsule is thickened medially into the ulnar collateral and laterally into the radial collateral ligaments. The joint is lined with a synovial membrane which encloses the head of the radius. Therefore for clinical purposes it is best to consider the proximal radioulnar articulation as part of the elbow. This is a pivot-joint in which the circumference of the head of the radius is bound to the radial notch of the ulna by the annular ligament. Beneath the neck of the radius is an eminence called the radial tuberosity into which is inserted the tendon of the biceps brachii. During examination this tendon can be felt as a heavy cord at the front of the joint. The proximal extremity of the ulna is made up of the olecranon and coronoid processes and the semilunar and radial notches. The olecranon is a curved eminence making the proximal side of the semilunar notch and is bent forward at the summit so as to present a prominent lip which is received into the olecranon fossa of the humerus during extension of the forearm. The triceps brachii is inserted into its superior surface. The coronoid process is a triangular eminence at the distal side of the semilunar notch. Its apex is pointed and is received into the coronoid fossa of the humerus during flexion.

The lower extremity of the humerus, flattened from before backward and curved slightly forward, is composed of the articular surface and the medial and lateral epicondyles. The joint surface is divided into two parts. The lateral portion, the capitulum, articulates with the cup shaped depression in the head of the radius and is limited to the front and lower part of the bone. The trochlea is the medial portion and is situated at a slightly lower level than the capitulum thus making the carrying angle. It fits accurately within the semilunar notch of the ulna. The medial epicondyle gives origin to the flexor group of muscles and the lateral epicondyle to the extensors. Anterior to the joint is the broad brachialis and posterior is the triceps. Also passing the joint are large nerves and blood vessels. Between the medial epicondyle and the trochlea on the posterior aspect is the sulcus for the ulnar nerve. The radial and median nerves pass the joint at the front as does also the brachial artery and vein. These important structures must be kept in mind during the care of bony injuries in this region.

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*Read at the Northeast Mississippi Thirteen-County Medical Society, Pontotoc, Miss., March 15, 1938.

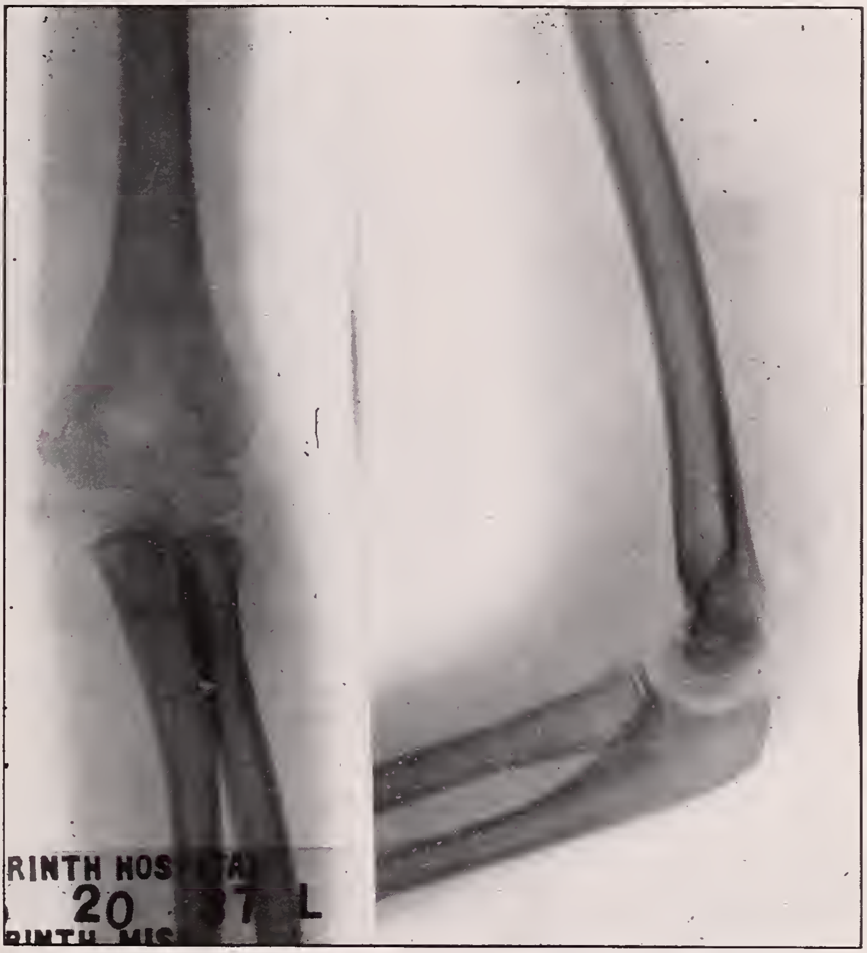

Fig. 1. Normal roentgenogram. Diagnosis: Contusion of epiphysis.

Movements of the elbow proper are flexion and extension of the forearm on the arm. Due to the obliquity of the trochlea this movement is not in an anteroposterior plane. During extension the forearm is directed laterally, while during flexion it comes to the midline of the body making the mouth easily accessible to the hand. Therefore, in treating fractures of this region it is necessary to preserve the carrying angle.

With this much knowledge of the anatomy one is able to recognize a departure from the normal contour of the part. If the patient is seen promptly there may be very little swelling, allowing identification of the bony prominences. The relative position of the epicondyles and the olecranon which normally describe a triangle when the elbow is flexed and a straight line during extension may be observed. Inspection reveals any wound of the skin as well as ecchymosis and swelling. Contusion of the epiphysis and sprain produces generalized swelling. In dislocation of the head of the radius the swelling is asymmetrical, more of it being anterior. In this injury flexion is blocked. Fracture of the internal epicondyle produces marked puffy swelling at the inner side of the joint thru which the separate movable piece may be palpated. This injury often causes nerve pressure resulting in anesthesia of the little finger and indicates the necessity of routinely examining for nerve injury. Supracondylar fracture produces rapid generalized swelling around the joint region. The circulation may be so inhibited by pressure against the brachial artery that the radial pulse will be small. If no marked swelling has been produced the displaced distal fragment of the humerus may be palpated at the back of the joint. This is the most common direction in which the fragment may be pushed. Nerve pressure may cause paralysis. Nerve injury should be tested for during examination.

A rapid simple procedure for determining nerve injuries below the level of the midarm consists of an inspection of movement in the wrist and fingers. Inability to completely extend the thumb immediately suggests radial involvement. It is further confirmed by anesthesia over the dorsal surface of the base of the thumb, and also by inability to elevate the wrist and extend the fingers at the metacarpophalangeal joint. Median nerve injury in any location will affect the opponens pollicis, making it impossible to oppose the palmar surface of the thumb to the pads of the extremity of the fingers. This is confirmed by loss of sensation in the palmar surface of the first three fingers and by inability to flex the index finger when the other fingers are extended. Ulnar nerve injuries paralyze the interosseous muscles preventing lateral movement of the fingers. This is revealed by inability to bunch the ends of the fingers, confirmed by loss of sensation in the little finger.

X-ray examination is of paramount importance in establishing the diagnosis. In making the x-ray film, one desires the maximum information that may be obtained. Therefore, it is important to posture the part properly. In this procedure difficulty may arise due to pain experienced by the patient in moving the elbow. If possible a true anteroposterior view should be made with the palm of the hand up. The lateral view should be made with the elbow at a right angle, the thumb being directed upward so that only the ulnar side of the forearm is in apposition to the exposure holder. This may be facilitated by using two sand bags, one against the palm of the hand, the other against the dorsum. This is the position to show the desired anatomical relationships and obtain maximum diagnostic detail. A common error in posturing is to make the lateral exposure with the elbow in extension and the palm of the hand turned down. This results in the head of the radius being projected as in the posteroanterior view instead of the desired lateral. Also the margins of the articular surfaces will be superimposed, failing to show the joint spacing and detailed contour. The ages at which ossification of the various epiphyses take place

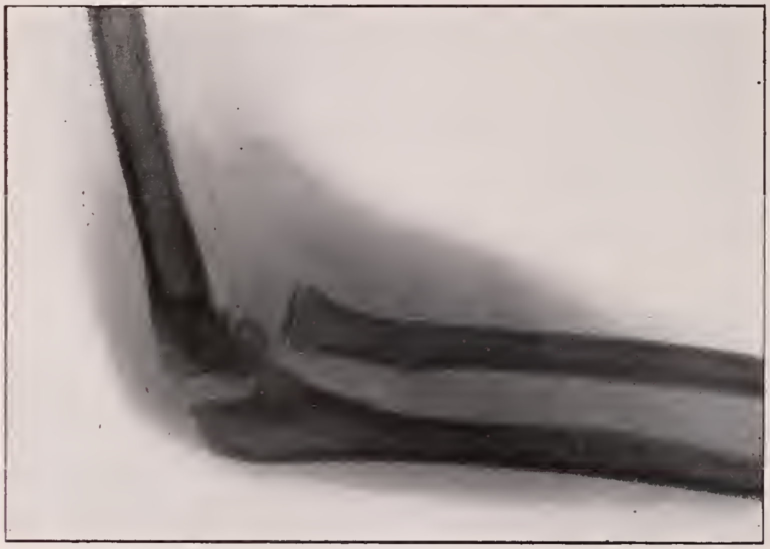

Fig. 2. Anterior dislocation of the head of the radius.

may not be easily remembered. Therefore, a roentgenogram of the opposite elbow may be made which will furnish an accurate pattern of how the normal joint and its epiphyses should appear.

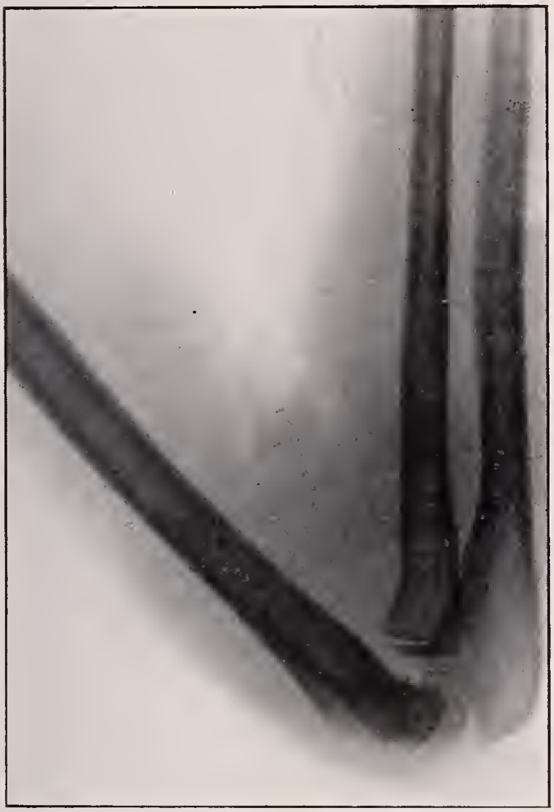

Fig. 3. Reduced head of radius. Note superimposed shadows of radial head and cornoid process.

If the patient coming for treatment of an elbow injury has no sling he usually will be supporting the forearm of the injured side with the opposite hand. The first illustration (Fig. 1) demonstrates the normal roentgenogram of a patient, age 5. This patient had rather severe swelling and suffered excruciating pain. She would not allow any motion of the part carefully guarding it with the opposite hand. The diagnosis was contusion of the epiphysis. This makes a rather severe injury, requiring three weeks to heal even though the x-ray film reveals no pathology. The treatment is hyperflexion (Jones position) maintained by adhesive strapping. The wrist is suspended by a Jones necklace fashioned from bandage tying the wrist to the neck. Before the forearm is flexed a piece of gauze is placed in the fold of the elbow. This prevents the two skin surfaces from touching which otherwise may become galled. The arm is cleansed at the end of a week and a new dressing applied. The second week the forearm may be lowered and suspended by a sling. At this stage physiotherapy is begun, employing hot water soaks and active motion. As soon as the soreness is gone gentle massage may be begun.

The next illustration (Fig. 2) shows anterior dislocation of the head of the radius. Note the separation of the head of the radius and the coronoid process of the ulna. In the next film (Fig. 3) the dislocation has been reduced showing the normal projection on the x-ray film, the shadows of the radial head and the coronoid process being superimposed. This injury is immobilized in hyperflexion as described above for two weeks then lowered into a sling and physiotherapy begun.

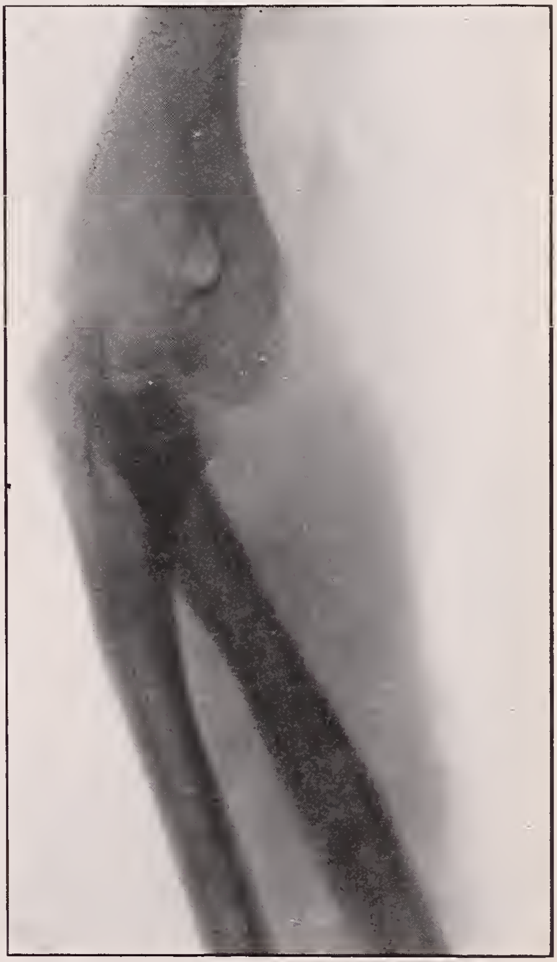

Fig. 4. Partial dislocation of the elbow.

The next illustration (Fig. 4) demonstrates partial dislocation of the elbow. This case was complicated with fracture of the internal epicondyle which is shown in Fig. 5 after the dislocation has been reduced. This would have been shown in the first film had the part been properly postured. This apparently trivial injury is a very serious one, much greater than would be expected from the amount of bone damage shown in the x-ray film. This injury usually involves the joint capsule. The small fragment often presses on the ulnar nerve, causing a neuritis. This particular case had anesthesia of the little finger for two weeks. Several months may be required for recovery, even in cases without dislocation of the joint. This is due to involvement of the joint capsule. Extension is the movement difficult to gain after this injury. By drawing on the sleeve at the inner side of the elbow one may gain the idea of how the anterior portion of the capsule may be pulled taught, thus limiting extension. The usual position of the fragment is downward and medialward (toward the ulna), due to the contraction of the flexor group of muscles which insert into it.

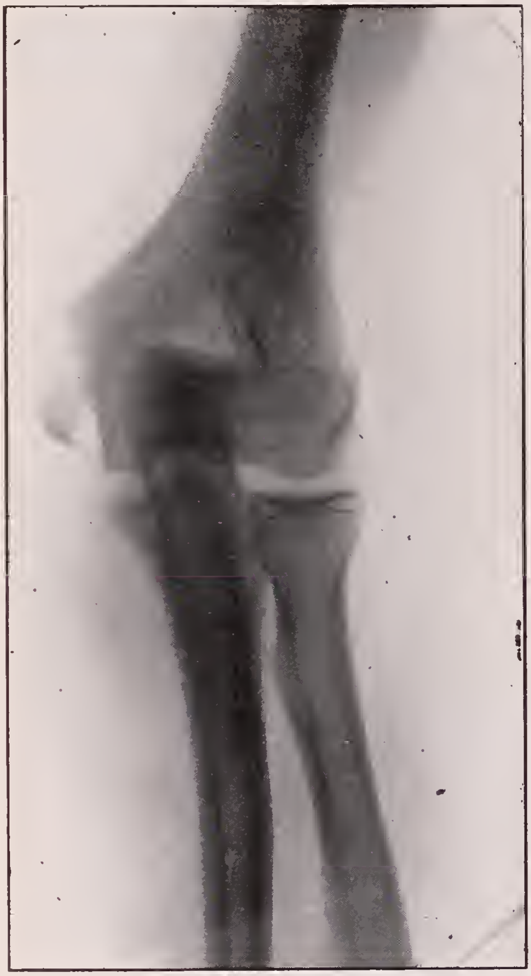

Fig. 5. Fracture of the internal epicondyle. This is the same case as Fig. 4 with dislocation reduced.

The optimum treatment is open reduction, using a wire nail for internal fixation. This case, however, refused operation. Instead of returning in a week as advised, he next appeared in about three weeks. All dressing had been removed and he was very much disappointed because the forearm, which had been immobilized in hyperflexion, would not extend to a right angle. At this time check-up x-rays were made, revealing the information in Fig. 6. The avulsed fragment is in slightly better position, being situated a little nearer the normal situation. It is flared out a little more at the distal side, allowing more room for the ulnar nerve. At this stage the nerve symptoms had disappeared. The patient continued

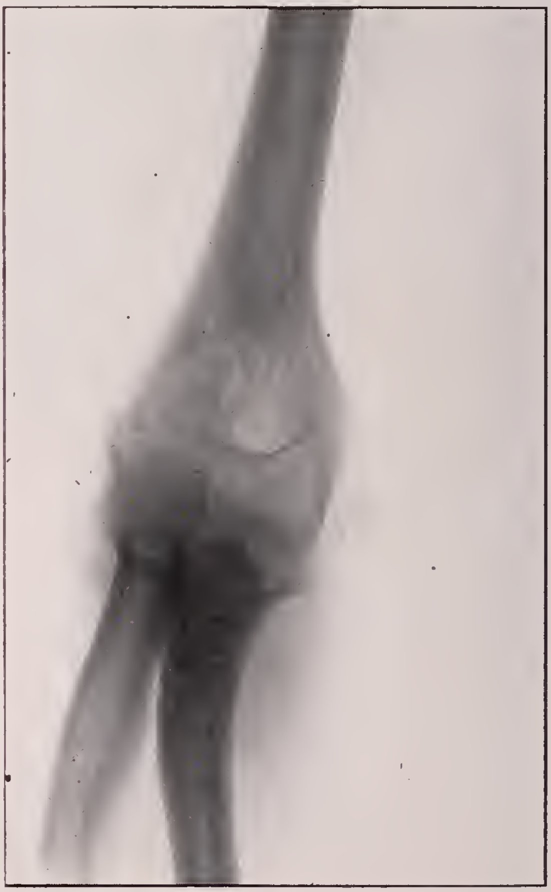

Fig. 6. Fracture of the internal epicondyle at three weeks duration.

physiotherapy consisting of hot baths and massage which resulted in gradual improvement. He returned at 8 weeks still disappointed, the elbow would open to a right angle. I am expecting him to continue to improve gaining more motion for eight months. However, he will lack about 10 degrees gaining complete extension. This prognosis is based on experience with previous cases. Since this fragment may encroach a little on the olecranon fossa as well as carry injury to the capsule it is best to do an open reduction on all cases of this type.

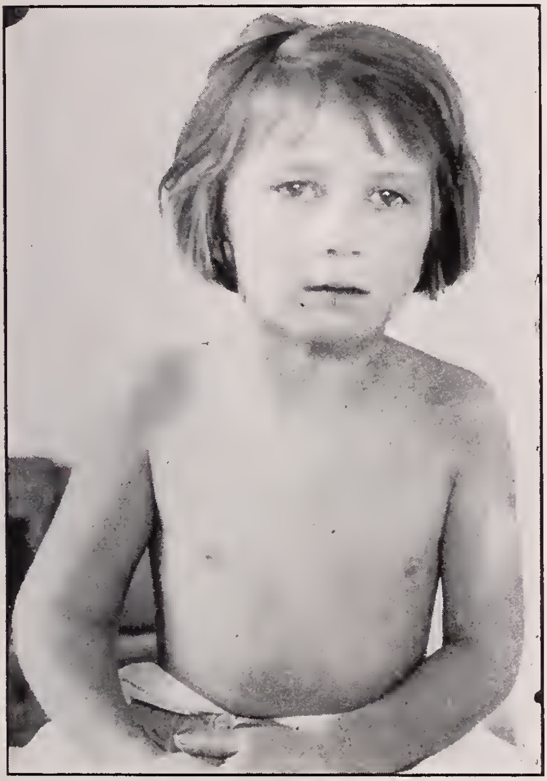

Fig. 7. Typical swelling of supracondylar fracture three hours after injury. Note attitude the patient assumes in supporting the injured extremity with the opposite hand.

Supracondylar fracture presents perhaps the most serious injury to the elbow. Figure 7 shows the typical swelling of this injury as well as the attitude the patient assumes in supporting the injured extremity. It will be noted that the diameter of the elbow is twice that of the normal one. This amount of swelling had arisen three hours after injury. The roentgenogram (Fig. 8) shows the fracture with rotation of the distal fragment. The lateral view (Fig. 9) shows the posterior dis-

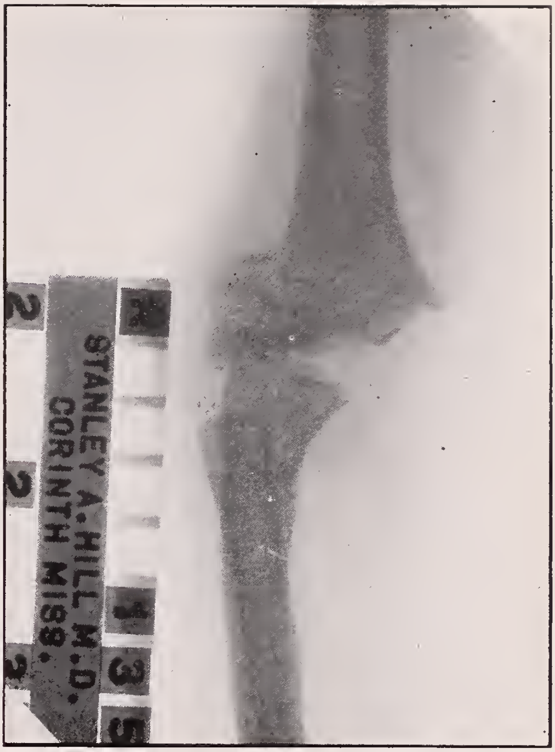

Fig. 8. Anteroposterior view of supracondylar fracture with rotation of the distal fragment.

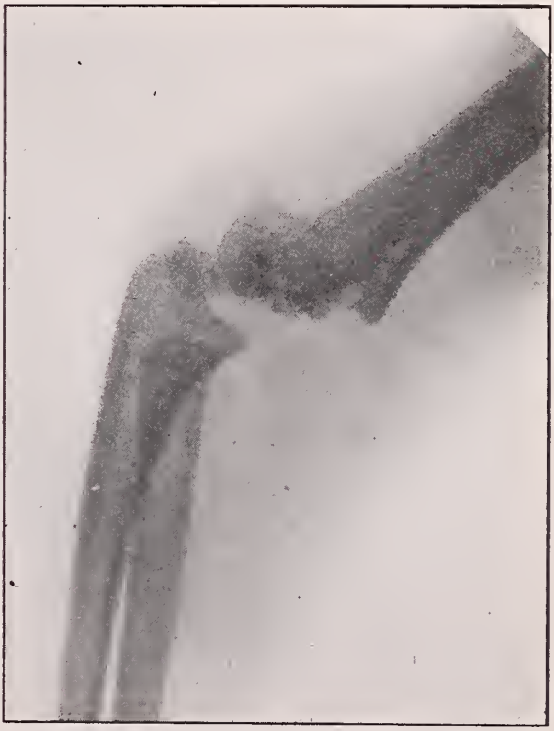

Fig. 9. Lateral view of supracondylar fracture showing posterior displacement of distal fragment.

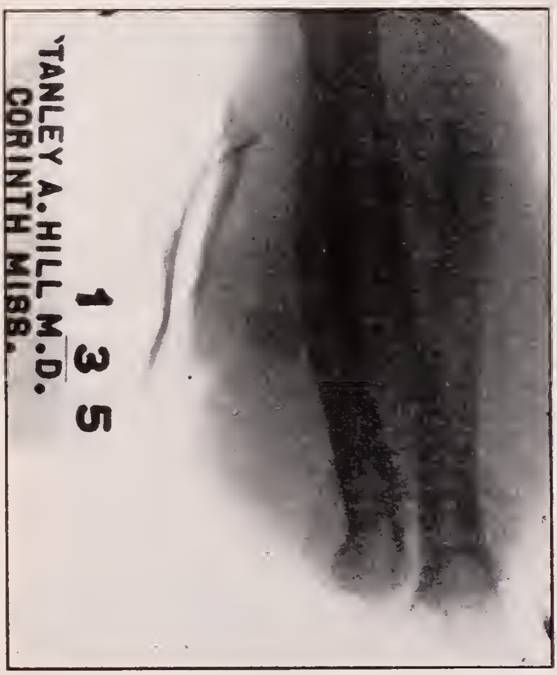

Fig. 10. Reduced supracondylar fracture showing immobilization in hyperflexion, anteroposterior view.

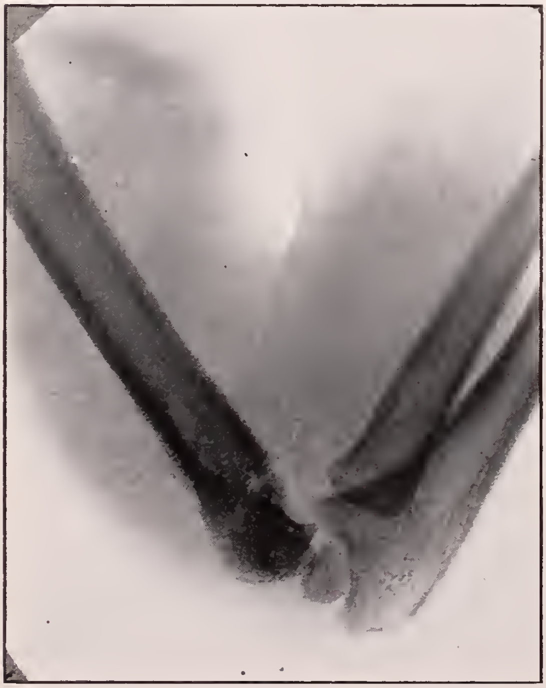

Fig. 11. Reduced supracondylar fracture showing immobilization in hyperflexion, lateral view.

placement of the distal fragment. Note the sharp anterior edge of the proximal fragment which, depending on the degree, may cut against the brachial artery, if reduction is not satisfactory, causing ischemic contracture. Treatment comprises general anesthesia, manipulation into reduction, fixation, and physiotherapy. Ether is the anesthetic of choice. Under surgical anesthesia the parts are manipulated into reduction. The most frequent displacement of the distal fragment is backward. This kind of supracondylar fracture is reduced by pulling the distal fragments forward with the fingers while backward pressure is made with the thumbs against the proximal fragment. Meanwhile an assistant supports the forearm and exerts moderate traction. Reduction and immobilization in hy-

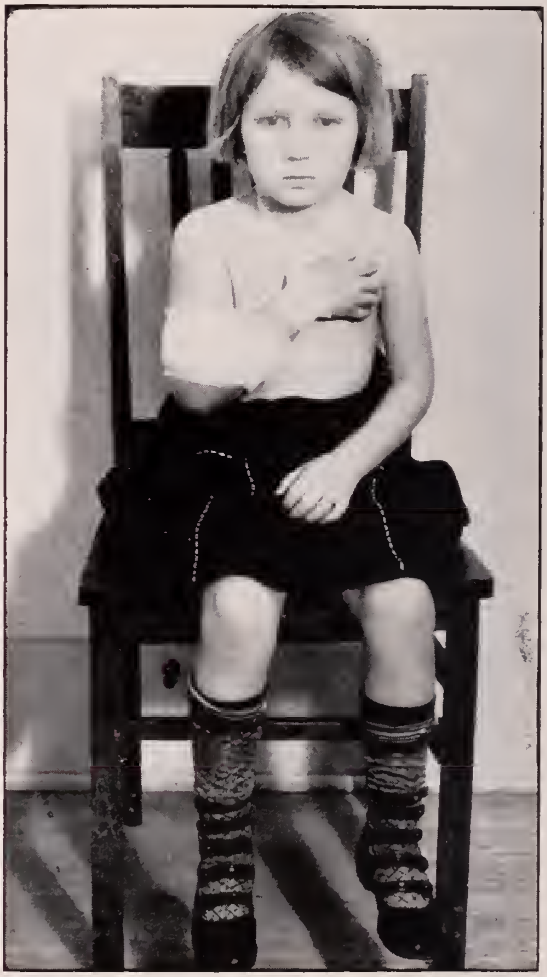

Fig. 12. Photograph demonstrating the dressing for supracondylar fracture and the Jones necklace. Compare the facial expression of relief here as against the anxious one of pain in Fig. 7.

perflexion with an adhesive dressing is demonstrated in Figures 10 and 11. Hyperflexion is defined as extreme flexion without compression of the brachial artery. Always after reduction it is necessary to elicit a strong radial pulse.

The last illustration (Fig. 12) is a clinical photograph demonstrating the dressing composed of adhesive and bandage. The elbow is immobilized in the position of hyperflexion and suspended by the Jones necklace. The patient must be observed closely for the first 24 hours to detect any dangerous swelling, carefully noting the capillary circulation through the fingernails and palpating the radial pulse. The dressing is changed at weekly intervals. At the end of two weeks it is lowered out of acute flexion. At three weeks active motion is begun, also using hydrotherapy and gentle massage.

The prognosis may be rather accurately gauged by the position of the fragments shown in the check-up x-ray film. If poor reduction has to be accepted take lateral displacement. It may result in a gunstock deformity but there will be good function.

SUMMARY

Contusion of the epiphysis presents a severe injury that may only be differentiated from fracture or epiphyseal separation by x-ray examination.

Dislocation of the head of the radius is clearly demonstrated by the roentgenogram and may yield to closed reduction when seen early.

Fracture of the internal epicondyle is a serious injury—more so than the amount of bone damage would indicate. Open reduction should be the treatment. This injury shows that a small hurt to the elbow is a great one.

Supracondylar fracture is a severe injury and requires accurate reduction. In making the diagnosis examine for nerve injury. Proper posturing for x-ray examination will produce a film yielding the most information.

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Address to the Graduating Class of Nurses

AT FIELD MEMORIAL HOSPITAL

Centerville, Miss., Dec. 4, 1937

By ISIDORE COHN, M.D., F.A.C.S.
NEW ORLEANS, LA.

YOUR GRADUATION near Thanksgiving is a fortunate omen. For you it is a time of thanksgiving because you have completed your training. There is, however, a greater cause for rejoicing and thanks, and that is your privilege of walking in the paths of Florence Nightingale.

I say Florence Nightingale because she is the symbol of the profession to which you are now attached.

The most familiar picture of her is one in which she is seen with lantern in hand walking in the dark corridors of the hospital of Scutari. When this picture is analyzed one can read the story of nursing up to that time, and the prophecy for the future. The corridors were dark and the wards were foul with the odor of gangrene and infection. You can almost hear the plaintive wails of the dying. This lone woman with the lantern symbolizes her self-sacrificing devotion, and her vision for the development of an educated, trained group of nurses who were to replace the Sari Groups, or slovenly unskilled, uneducated caste of women who served as menials in hospitals at that time.

The lantern is also a symbol of education. Florence Nightingale and the lantern symbolize nursing education.

In Genesis we read "Let there be light." Before the light, darkness and chaos prevailed. Darkness—the symbol of ignorance and chaos of superstition were cast aside by the light of faith and education.

Education is light, as it lifts us above the ways of ignorance and superstition.

In the dawn of civilization, or even before the existence of human life upon earth, some form of aid for the injured and disabled must have been practiced. Woman has always been the nurse. In the complexity of modern civilization and the unfolding of human knowledge the need for the intelligent educated nurse has increased. This demand is being met when you follow in the footsteps of the great women of history. Just as the warmth of the sun causes the dormant germinal elements in plant seeds to take nourishment from the soil and to grow into spreading oaks and clinging vines, so has the light of education and opportunity caused the potential elements for service to develop within womankind. Florence Nightingale planted the seed which has grown beyond the fondest hopes of that noble woman. Her plea was for education of the nurse. Her life was devoted to service. Her service to the stricken soldiers of the Crimean War would have been forgotten had she not fired the imagination by her self-sacrifice. The lantern which she carried may well be taken as a symbol of the light of service. This light must be kept burning. Its rays must not be distorted by any act of yours.

A nurse should be true to the formula: TRAINED NURSE. She should be trustworthy, ready, able, industrious, not noisy, energetic, determined, neat, untiring, rapid, silent and enthusiastic to the end.

Let me suggest that you work with your head that the light of reason may direct your efforts. Reason through knowledge lifts one's efforts to a higher plane. It makes work a joy and lifts it above mere drudgery. Efforts thus directed will then bring the smile of contentment to the patient and in the evening a sense of satisfaction will be yours that cannot come any other way.

Your smile will be like the rays of sunshine in the lives of the patients momentarily darkened by despair and pain.

Let the light of your lives illumine the path to be followed by your successors.

Let your character be above reproach. May your actions defy the most penetrating rays of investigation which seek to find evidence of betrayal of the trust imposed in you by the institution which is giving you something of its spirit of idealism.

Let the flame of the spirit of Justice, Charity and Mercy be fanned by your lives that the spark kindled here may be eternally bright.

Training schools for nurses differ from other schools in that they are usually hospitals. Hospitals should be the embodiment of the ideals expressed by the great Biblical character: "To do justly, love mercy and walk humbly."

To do justly means the Golden Rule, to do unto others as you would have them do unto you.

Loving mercy is evidenced by consideration of and sympathy for the sick and suffering who come within the hospital's activities.

No place in the world teaches humility so well as a hospital. When one stands by the bed of pain and witnesses approaching death, he is bound to realize how little one knows and how narrow are the margins of his ability to aid the suffering. These experiences should be sufficient proof of your own humble position in the great world which surrounds us.

Your hospital has attempted to prepare you for the duties of private nursing.

When considering the functions of the nurse, particularly that of bed-side care, we remember that the nurse is a representative of the doctor in charge, therefore, she must be sufficiently trained to interpret symptoms of sudden or unexpected changes. She must be calm and her actions must not be colored by sympathy but reasoned actions must characterize her activities. She must not work by the clock. In order to serve best, her actions must be conditioned by a real interest in her problems, rather than the daily financial remuneration.

She should be silent, swift, safe, smiling and solemn. She should be silent of tongue, swift in action, safe in judgment, smiling of countenance and solemn in devotion to duty.

It is the duty of the nurse to record accurately the happenings in the absence of the doctor in such a vivid manner that the doctor at the time, or later on, may reconstruct for himself the picture with the least effort. Accurately collected statistics are dependent on the nurses's chart.

In order to carry out the duties above outlined the nurse must be a woman of character.

The moral character of the nurse should be above reproach.

I do not believe that it is necessary to enlarge upon this because the implications are too clear. Anyone whose morals are not of the highest cannot be depended upon to appreciate the sacred responsibility of the care of the sick. In everything which she does a sincerity of purpose must be evident.

Her motive in undertaking a course of training to become a nurse must be primarily higher than the mercenary ends and financial remuneration.

Unless her character is of the highest she will not appreciate the importance of silence. She must understand that in her capacity as a nurse she will receive confidences, either from the patient or through her contacts with the doctor, with reference to the patient, which if not guarded may forever cast reflections upon another's character.

The nurse's character further reflects in her appreciation of the importance of cooperation with her superiors, that discipline may be maintained.

Her attitude towards patients should always be one of sympathy, bordering almost on pity, for unless such emotions are aroused in her, she will fail to be as gentle and tender with the sick as she should be.

Whatever is ordered must be done promptly and efficiently. In a word, George Elliott's expression, "What do we live for, if it is not to make life less difficult for others," should be a motto of the nurse.

In closing, let me congratulate each of you and wish for you a successful career.

Diagnosis and Management of Head Injuries

By J. M. DORRIS, M.D., F.A.C.S.*
MEMPHIS, TENN.

THE WIDESPREAD use of machines, and the rapidly moving automobile over hard surfaced roads have contributed greatly to the increase of injuries to the head. In the United States in 1937, more than thirty-five thousand deaths were caused by the automobile alone, and a million major injuries were ascribed to the same source. Over thirty thousand fractures of the skull are reported yearly in industry. Inasmuch as these accidents may occur away from hospitals and medical centers the doctor in any community may be suddenly called upon to handle these emergencies.

In the general discussion of head trauma, injuries to the scalp and to the skull are of secondary importance to the damage done to the brain. The scalp and skull merely constitute a protective container for this vital organ. It must be remembered that severe damage to the brain may occur without visible clinical injury to the scalp or skull. Likewise, a severe scalp wound with fracture of the skull may present little evidence of brain damage.

Injuries to the skull are of two general types, and the nature and extent of the brain damage can be roughly gauged by the manner of occurrence. The first type of injury is one in which a small rapidly moving object strikes the skull; for example, a hammer, a monkey wrench, or even striking the head forcibly on a sharp, protruding ledge. The scalp may or may not be divided, but if the force is sufficient, the skull will be sent in until it breaks, either giving the typical "stellate" fracture with slight depression, or, if the force is still greater, there will be complete separation of the fragment, giving a "punched-out" appearance with considerable depression. This type of injury usually causes only local brain damage, unless the patient sustains further injury to the brain by falling bodily to the hard pavement or floor. The dura is likely to be torn, and the underlying vessels and brain lacerated. There is very little general edema of the brain, and, unless the injury lies over a motor, sensory or special sense area, there will probably be few neurological symptoms. The intracranial tension rises very little unless complicated by intracranial hemorrhage —and in cases of this type, a great increase of intracranial pressure is always suggestive of middle meningeal or subdural bleeding.

The second type of injury to the head is met with when the head strikes violently against a flat hard surface, or is struck by some such object (i. e. striking the ground or pavement or being struck by a wide flat board). In this type of injury the skull is flattened by the impact, and finally breaks when the limit of elasticity is reached, and gives rise to the so-called linear fracture which radiates from the point of contact. The brain damage is usually much greater than in the first mentioned type because of the wide area which receives the blow. The immediate brain is bruised, and the entire brain receives a "shake-up," followed by generalized edema.

The problem is to maintain the intracranial pressure within limits that are compatible with the function of the three vital centers located in the medulla, the vaso-motor, the respiratory, and the cardio-inhibitory. As the intracranial pressure increases, the blood supply to these centers is diminished, and the resulting anemia stimulates the medullary centers to compensate the failing circulation. The blood pressure, therefore, rises, restoring the equilibrium of the medulla. This is called "medullary compensation." However, rise of blood pressure causes a rise in intracranial pressure. The intracranial pressure again embarrasses the circulation, and medullary centers again demand more blood, thus, a vicious cycle is established. If the intracranial pressure continues to increase, eventually activ-

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From the Department of Surgery, University of Tennessee College of Medicine, Memphis, Tennessee.

ities of the medullary centers cease—called "medullary failure." During this stage the blood pressure fails, pulse increases, respiration ceases, and the patient dies. It is generally accepted that stimulants to the medulla in such cases are not only useless, but harmful.

The injury to the skull is of relatively little importance, unless the crack runs into some of the nasal accessory sinuses, the mastoid, the auditory canal, or tears across a meningeal vessel. In such instances meningitis, rhinorrhea, and meningeal hemorrhage are to be suspected. The meningitis may come on days or even weeks after the injury. Middle meningeal hemorrhage should be promptly diagnosed and treated by ligation. The widely separated linear fractures may prove a blessing in disguise, in so far as they allow some expansion, and so, may "decompress" the swollen brain.

The diagnosis of the degree of head injuries and the immediate institution of appropriate treatment are of paramount importance. Where there is a compound fracture, the fracture can be diagnosed by palpation with the finger or instrument. Every suspected fracture case should be x-rayed, if the patient is in satisfactory condition. It is unwise to transport a seriously injured person to and from an x-ray table, if it is obvious that no operative treatment is to be administered until reaction occurs.

A clear, concise history, and a complete examination of the patient are indispensible to a correct diagnosis. The pupillary reaction, presence or absence of knee jerks, and presence or absence of paralyses of the extremities and face should be noted. Blood pressure, pulse rate, and respiration should be taken every fifteen to thirty minutes until a definite conclusion is reached, for, by these criteria, one is able to judge accurately the amount of increase in the intracranial pressure and the status of the medullary circulation. A sudden sharp rise in temperature is an unfavorable sign. If indicated, a lumbar puncture may be done, observing the presence or absence of blood, and recording the pressure by a water manometer. Spinal puncture should be done with a small needle, and the fluid allowed to drip slowly. This will gradually decompress the swollen brain. Formerly a puncture was done to remove the blood from the subarachnoid spaces, but Sprong, of Montreal, has shown that the blood is removed in a few days by absorption, and is independent of the lumbar punctures.

Injuries to the brain vary in degree from very severe massive lacerations, which are incompatible with life, to the very minor concussions. Between these extremes are intra-dural hemorrhage, extra-dural hemorrhage, and contusion complicated by edema. These different symptom-complexes may merge from one group into another, or, there may be various combinations of the groups. The classification used by the late Dr. Charles E. Dowman is clear and simple.

1. CASES OF RAPIDLY INCREASING INTRACRANIAL PRESSURE

(a) Massive brain injury with evidence of rapid exhaustion of the medullary centers. Treatment is futile, and regardless of the measures employed, all such patients die. The best that can be hoped for is the employment of methods to combat shock and to keep the patient under observation in the hope that the diagnosis may prove wrong.

(b) Cases of rapidly increasing intracranial pressure, within the limits of medullary compensation. As soon as it can be ascertained that these cases are compensative, Dr. Dowman advised that they be given the benefit of a decompression, provided non-operative measures do not very quickly control the swelling. It is rapidly becoming more common to be conservative in such cases, and to use nonsurgical or physiological means to reduce the pressure, that is, repeated doses of 50 per cent glucose intravenously, saturated solution of magnesium sulphate by mouth and by rectum, restriction of fluids to about 100 c.c. daily, and finally by lumbar puncture. This latter practice should be done with care releasing small amounts of fluid so as not to get a medullary failure due to pressure in the foramen magnum. However, the decompression, which is usually done under the right temporal muscle, according to the skin, a continuous hypodermoclysis, as it were, of the patient's own cerebral fluid.

2. CASES PRESENTING EVIDENCE OF MIDDLE MENINGEAL HEMORRHAGE

Immediate recognition of this condition and surgical intervention are essential. The typical symptoms are very characteristic. The "lucid interval" which follows the unconsciousness of a severe blow on the head may vary from a few minutes to several hours. After a variable period of time, unconsciousness again occurs, together with the signs of rapidly increasing intracranial pressure, followed by a contralateral hemiplegia.

3. SIMPLE OR COMPOUND DEPRESSED FRACTURES OF SKULL

This type of case is probably the most frequent that is encountered. In general, the treatment consists of a careful debridement of all the contused and lacerated scalp, after thorough cleansing with a mild antiseptic agent, as Dakin's solution. No dehydrating alcoholic solutions are used in the wounds, for such solutions hinder primary healing. The bone fragments are removed (and the larger ones washed in Dakin's solution), the dura is inspected and is repaired if torn. If the dura is intact, it is unwise to open it unless there is hemorrhage underneath, in which case the dura is blue, tight, and does not pulsate. The bleeding is controlled by ligation, electro-coagulation, or bits of muscle placed on the small bleeders. The larger pieces of bone are replaced, and the skin is closed in two layers with interrupted sutures of fine black silk. The wound is never drained; it is necessary for the vast majority heal by primary union within three or four days, and if serum pushes up the scalp, it is only necessary to cut one or two stitches to allow drainage.

4. CASES PRESENTING DEFINITE EVIDENCE OF BRAIN INJURY BUT WITHOUT SIGNS OF ACUTELY INCREASED INTRACRANIAL PRESSURE

Cases that fall into this classification may, or may not, have fractured skulls, and the brain symptoms are usually mild. The only complaint may be headache. They should be placed under observation, and dehydration treatment started.

In these cases also, there are frequently cracks which run into the base into the sinuses or mastoid. Very little can be directed toward the prevention of meningitis, except to instruct the patient not to blow his nose, cough or sneeze. Antiseptics in the nose and ear have proved inefficient. In a crack through the base, involving the auditory canal, through which bloody spinal fluid is leaking, it is wise to place sterile cotton in the ear to absorb the fluid, to be renewed when saturated. This prevents the washing of the contaminated fluid in the ear back into the subarachnoid spaces.

5. CASES IN WHICH X-RAY SHOW LINEAR FRACTURES BUT WITHOUT SYMPTOMS OF INTRACRANIAL DAMAGE

Such cases should be kept under observation, preferably in bed, for at least a week and repeated examinations made to ascertain if new signs have appeared. It is often necessary to observe a patient for sometime properly to evaluate the injuries. If no symptoms or signs of injury to the brain arise, the headaches, etc., may be properly treated on a symptomatic basis.

6. CHRONIC SUBDURAL HEMATOMA

This is not so rare as once thought, and is definite in its train of symptoms, although ventriculography, or tapping the suspected area through a small opening may be necessary before a correct diagnosis can be made. There is usually a history of a slight injury, which the patient has forgotten or discounted as trival, such as falling onto the shoulders and head, or even without striking the head. After a few hours to weeks, signs of increased intracranial pressure, usually without localizing signs, appear. Intense headache is usually a constant sign. Drowsiness merges into inconsciousness. Paralysis is very late in occurring. These cases are frequently diagnosed as brain tumors. In case of doubt, tapping the suspected area through a small opening, is always indicated. In some cases the hematoma is bilateral, and this fact should be kept in mind when the symptoms do not clear up after uni-lateral drainage. Treatment consists of making a small trephine opening, incising the dura, and of suctioning away the brownish-black blood. Some neuro-surgeons advocate the making of several openings over the hematoma, if it is large, and irrigating through and through with saline. Others merely make the openings, and leave a small drain for 24 to 48 hours. A sub-temporal decompression is sometimes done. The accepted theory of the formation of the hemorrhage between the arachnoid and the dura, from which space it cannot be absorbed, is that the larger cortical veins entering the venous sinuses are torn by the dropping away of the brain from the skull wall at the time of injury. This slight bleeding may occur intermittently for days or weeks before symptoms occur.

Certain general measures are also applicable to the treatment of brain injuries. Shock must be combatted, preferably by rest, heat, and hypertonic glucose intravenously. Glucose draws fluid from the tissues, replacing that lost by hemorrhage or diapedesis, and dehydrates the edematous brain at the same time. Morphine masks symptoms in head injuries as well as in abdominal emergencies, and should not be used until definite plans for treatment are made.

Very often following severe intracranial damage, excessively **high fever** may result. Ice bags, cold sponges, and cold colonic irrigations should be used. Bath towels soaked in ice water, placed on the extremities and body, over which an electric fan is allowed to blow, usually controls the hyperpyrexia. General **irritability** and restlessness can usually be controlled by the judicious use of barbital.

Proper attention should be directed to the care of the bladder and bowel function. In unconscious patients, it is highly important that the patient be kept on his side to prevent "swallowing of his tongue," with the attendant cyanosis and pulmonary edema, which conditions raise the general intracranial pressure.

Prognosis depends entirely upon the severity of the injury to the brain and the promptness of appropriate treatment. Those series containing the largest percentage of massive injuries will have the highest death rate, and in Dowman's series it was 20 per cent. The less serious injuries will run considerably less, ranging around 10 per cent on an average.

The convalescent cases should be restricted in their activities for many weeks, depending on the seriousness of the brain injury, and allowed to return to their usual occupations only after repeated negative neurological examinations.

Epilepsy, always a dreaded sequela, may appear after a period varying from two to ten years in a small percentage of cases. Headache, restlessness, fatiguability, inability to concentrate, and change of personality are distressing symptoms that may last for a varying period of time, or may even be permanent.

The Role of the Private Physician in Public Health*

By T. M. DYE, M.D.
Secretary, State Medical Association
CLARKSDALE, MISS.

I AM TALKING this morning primarily and directly to the 959 members of the Mississippi State Medical Association, at least 958 of whom are my friends, and half of whom call me Tom.

The role of the physician in public health work is that of a friend toward a colleague who is doing exactly the same kind of work, helping the same people, saving the same lives, serving the same public.

Essentially we are all in public health work. We may not be on the Board of Health pay roll, but we are always dispensers of preventive medicine—or should be.

There can be no conflict between the effort to cure and the effort to prevent. Curative medicine can have no place except when preventive medicine has failed or been neglected. The curing of the sick steps in only after the prevention of disease has failed. Let's bend more efforts toward preventing, then there will be less need to cure.

In this Era of Individualism it is refreshing to see physicians who are willing to submerge their selfish ambitions for public service. Ours is primarily a profession of love—a profession whose cardinal virtue should be SERVICE, a desire to help the man who is suffering. If we do not have this consuming love for mankind then we are of all men most miserable, for the practice of medicine is not a commercial project.

Just here I should like to say to young men upon the threshold of life that if they do not feel this penchant for helping, this burning to relieve suffering, then they had better launch their canoes upon some other sea, some other profession or business where there are opportunities for commercial gain. If you do not feel that the commendation of your fellow man is worth more than a bank account, then don't try medicine.

The attitude of the physician toward public health work is dependent in large measure upon local health authorities. In my home county where public health service has reached a high degree of efficiency, we have been most fortunate in our public health officials and workers. We have no conflict. We have no overlapping of work. We have no stepping on each other's toes. Each works toward helping the other. Each respects the other's responsibilities and the other's limitations. In such a situation public service reaches its highest goal.

The physician who resents the effort to prevent disease, who prefers to cure—for a fee—rather than prevent, has not had his training at the feet of the Great Physician. He has missed the highest attainment. He has failed to reach the summum bonum, the ultima Thule, of the lovers of mankind.

Love is the great mainspring of life. It is love that makes us forget the grovelling things of earth—love that makes us approach the Divine. Love will tell us to protect the eyes of the newborn baby. Love would prompt us to prevent all disease, all suffering. To this end our best efforts are directed. To this end we should co-operate with out state and local boards of health.

We should not be content to be passively friendly, but we should be co-operatively friendly. The public should know by our attitude and by our conduct that we appreciate public health and that we cheerfully give to preventive medicine its proper place in the sun.

We should make it plain to appropriating bodies that the medical profession stands squarely behind boards of health, that appropriations made for public health are in the nature of investments, and that dividends will be paid in healthier boys and girls, happier homes, better living. These dividends will continue to us long after we have forgotten the original appropriation.

Visit your local health department rooms.

**Delivered over radio station WJDX, Jackson, Miss., March* 26, 1938.

Talk to your director and his assistants. Encourage them in their efforts. Commend them when you can. Give friendly and constructive advice to them. Show them that you want to help, not hit. Try these things a time or two and you will find that you will get better service, that they will be better health officers.

Study the problems that your health department is working on. You will find a well thought-out, an intelligently ordered, and a well-organized plan. Study to make this plan fit into your scheme of private practice. Study to help, not hinder. If you have not tried this, you will be pleasantly surprised to find that your goals are much the same. You will find that you can be of a worthwhile service to the department; and you will also find that the department will be worth much to you.

Organized medicine has its opportunity to help foster and to lend color to health work. In Mississippi the State Board of Health is the child of the State Medical Association. The personnel of the Board of Health is made up from our own brothers, chosen for their special work by ourselves. Every man on the Board of Health, save one, the member representing the State Dental Association, is an active, intelligent, and loyal member of the State Medical Association. If he hasn't these qualities, he cannot get on the State Board. There is no other way provided for Board of Health membership. Each year the State Medical Association meets and selects from its own, the men best qualified and best equipped to serve the public in preventive medicine.

Certainly we can do no less than endorse the work our own colleagues have planned. Certain it is that intelligent co-operation and loyal helpfulness are the least that can be expected of us. Thus, working together for a common good and for a common service, our labors of love join hand in hand in working together for a greater and a healthier Mississippi.

THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

W. H. ANDERSON, M.D., Editor-in-Chief
MILDRED P. ANDERSON, Assistant Editor

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Published monthly at Booneville, Mississippi

Annual subscription $1.00.

Entered as second-class matter, January 19, 1926, at the post-office at Booneville, Miss., under the Act of March 3, 1870.

We appreciate very much a copy of the CANCER MANUAL, developed by The Executive Cancer Committee of the Iowa State Medical Society. It represents much careful study and work. We are sure this state association deserves much credit for this effort.

You will find that Tishomingo Park is a lovely place to hold a medical meeting. The doctors of that county will entertain well. The natural scenery at the park will interest you. It is going to be a great playground for Northeast Mississippi when it is completed. If you think you will have trouble finding the way, just come to Booneville and it will be easy.

Report No. 1 on the Rowland Medical Library of the University of Mississippi is just out. It was prepared by Dr. P. W. Rowland, the field director. It is dedicated to the loyal sons and daughters of "Ole Miss" School of Medicine, to members of the Mississippi State Medical Association and to friends outside the state, authors and teachers who have all responded liberally in building the library. This report gives a brief but concise history of the library to date and discusses the service it is to render with the regulations. The report gives a list of the journals in the library, the numbers missing that might be supplied, and a partial list of new books donated and bought, and also a list of contributors to date. It is an inspiration to know what Dr. Rowland is doing for this library. It is a great piece of service and a monument that will ever live and work. We have said many times that if a man keeps mentally and physically fit he may be worth more to human society each day that he lives, even though he lives to be a full hundred years, Dr. Rowland has been a great teacher, one of the best in the South, but now he is doing his greatest work. Don't fail to respond when he calls.

Through an educational campaign we have made some progress in treating carcinoma of the breast. The diagnosis is made earlier which offers the only hope of more successful treatment. In carcinoma of the cervix and body of the uterus, we have not done so much perhaps. Medical societies continue to split hairs on just how large the dose of radium and x-ray should be in the treatment of these cases, especially the advanced ones. The whole procedure seems so difficult and so expensive that the rank and file of doctors go away feeling that they do not have much part in this fight. Of course, the cause of cancer is not known and naturally the treatment is difficult for all. But the active interest of the general practitioner must be enlisted if we are to make further progress in cancer of the uterus, especially of the cervix. He can do much for the general health of the patient wherein there must be some opportunity for prevention, and further he can be encouraged to examine every woman from thirty-five to fifty-five that comes to his office for beginning carcinoma of the cervix and take a careful history that would aid in diagnosing malignancy of the body of the uterus or appendages. The importance of co-operation between the specialist and the general practitioner becomes more apparent each day; but the greater hope for progress in lowering the death rate in cancer of the female reproductive organs is in the hands of the general practitioner. By investing more in office equipment, employing a trained nurse and examining patients for early cancer, for pre-cancerous conditions of the uterus, and by attention to the general health of his clientele, the general practitioner can render the very greatest service at this time in the fight on one of our very most difficult problems.

Dr. T. E. White, of Greenville, won the award for scientific exhibits at the Mississippi State Medical Association at Jackson at its last meeting. For sixteen years he has been the pathologist at Greenville, really the pioneer for Mississippi in the class of work he has done, as far as we know. This was not the first time for him to win distinction as a pathologist. He is a very thorough, able, and earnest student of pathology. It is very encouraging to see Mississippi developing in the field of pathology. It is very important. As we have said before, Dr. White deserves much credit for the fine service he has rendered as a pathologist.

Plastic surgery has a very definite relation to the industrial life of our people. Some thought that when the World War was over this special field would be more limited, but it is not. We have too many injuries in industry, in the home and on the highways. It has an important relation to psychology also. The person with a crooked nose may have an inferiority complex, may be depressed, and become discouraged, may really become a mental case. This specialty is here to live and to grow, it would seem. Beauty and symmetry constitute a valuable asset to any person.

I am wondering if a casual and fragmentary consideration of the rapidly changing status of medicine, coupled with comments on medical economics, might be interesting to some of the readers of this journal? I shall take the risk of being censured for the wasting of valuable space in the journal by calling attention to the above mentioned topics. In doing so I shall not attempt to be historically accurate, nor shall I go further back than my personal knowledge and experience extends. This writer has been engaged in the practice of medicine for something more than four decades. The word "appendicitis" had not been coined nor had surgery been resorted to for the relief of this condition, further than the drainage of abscesses that resulted therefrom; vaccination against typhoid fever and the use of antitoxine for the treatment of diphtheria had never been attempted when he began practice. Koch had, only a few years previously, announced the discovery of the organism that is the sole cause of tuberculosis. Malaria and, perhaps, yellow fever were thought to be due to some kind of "miasm." Pasteur had proved to some that hydrophobia might be successfully treated but many were still pinning a forlorn hope on the "madstone." I had never seen a gall-stone or gall bladder operation, while a few daring men might be found who could drain a liver abscess, but they attributed this condition to chronic malaria. Lord Lister's theory of sepsis and his crusade for "antisepsis" were beginning to bear fruit. This crisis, of course, marked the birth of modern surgery. But it yet remained for Metchnikoff, Wright and others to fathom and reveal the mysteries of infection and immunity. Then came the much flaunted but (I think) misleading side-chain theory of Erlich. It is my opinion that the confusion that followed this announcement retarded the fight against infectious diseases and even yet there is lack of full understanding of these conditions by reason of this confusion. Much has been done, and is still being done, but the end is not yet. When it was found that most diseases were due to specific organisms and causes, it followed, naturally, that specific cures should be sought for. Most of the old time drugs were cast aside as useless and rightly so. The pharmaceutical houses began to busy themselves in the production and distribution of new drugs and unheard of concoctions with startling but unreasonable claims for their preparations. Many of these, though similar in nature and composition, were marketed under different trade names and many doctors have allowed themselves to be led astray by claims that are strictly commercial and absolutely false in many instances. It now appears that it is necessary, therefore foolish, to spend time in studying materia medica and therapeutics since some bright young fellow will drop in on us presently and tell us that his house has solved the problems of treatment of disease and some nice looking, sweet smelling concoction is left with us free. Furthermore, we are told, and frequently convinced, that we are behind the times and out of step unless we begin, at once, to prescribe his preparation. Since the detail man was so nice and persuasive we "try" the sample out (is this fair and honest dealing with our patients?) But lo, it works. Our patients improve or recover promptly. They like the **new** treatment and freely advertise us and the remedy "(SOLD TO THE AMERICAN TOBACCO COMPANY.)" We **strut**, but do we **think**? In all probability the remedy used was entirely inert and its effect was purely psycological. Again, perhaps the disease was imaginary. So, while great progress has been made and is being made in the understanding of the nature and cause of disease, I wonder if we are not losing ground in the matter of scientific treatment of our patients? But let us take hope that in the near future when fuller knowledge of endocrine function and full and true understanding of the various vitamins have been worked out, we, or our successors, may feel that medicine is, indeed, a science and that we are entitled to the respect and confidence that our clientele has always bestowed upon us.

I find that it has taken more space to discuss this topic, even in such fragmentary fashion, than I had thought. So I will not touch the economics of medicine at this writing, but may do so at some future time.

G. S. B.

NORTHEAST MISSISSIPPI 13-COUNTY MEDICAL MEETING, JUNE 21

Dr. W. H. Anderson:

You will please help me out by directing the men to this State Park which is located 3 miles southeast of Tishomingo on Highway 25, out of Fulton, Miss., and off of Highway 78. The men south and west of Tupelo should either come to Tupelo or Fulton, hitting 78 at Tupelo, two miles east of Fulton, Miss., take 25 and follow it through Belmont where they will find out the correct direction.

The scientific program of the Northeast Mississippi Thirteen-County Medical Society, Tishomingo State Park, 2:00 p. m., June 21, 1938.

House called to order.—Dr. R. J. Brown. president, Iuka.

Invocation.—By the Reverend James Noel Henson, Belmont.

Suppurative Pericarditis.—Dr. T. H. Rayburn, Pontotoc.

Discussed by Drs. Toomer and Brown.

Observation on Heart Disease.—Dr. D. D. Baugh, Columbus.

Discussed by Drs. Carruth and Ellis.

Ear, Eye, Nose and Throat.—Dr. J. Harley "Pop" Harris, Memphis, Tennessee.

Differential Diagnosis of Lesions Producing Low Back Pain.—Dr. Guy A. Caldwell, New Orleans, La.

Very sincerely,
A. J. Stacy, M.D.

LIST OF OFFICERS, DELTA MEDICAL SOCIETY, 1938

President, C. W. Patterson, Rosedale.

President-elect, G. Y. Gillespie, Greenwood.

Vice-presidents: Bolivar, W. W. Hall, Shelby; Humphreys, J. W. Barkley, Belzoni; Leflore, J. C. Adams, Greenwood; Sunflower, U. S. Wasson, Moorhead; Washington, R. C. Finlay, Glen Allen.

Secretary and treasurer, F. M. Acree, Greenville.

IN MEMORY

On April the 14th, the death angel entered the home of Dr. J. S. Evans and carried his soul to its last resting place. Dr. Sid, as he was affectionately called, was born near the town of Houston on February 19, 1858, and in his early childhood moved there, where he spent a long and eventful life. He attended the schools of Houston and later attended the University of Mississippi where he completed his literary course. He took his first-course medical lectures in the Medical College of Mobile, Ala., and later received his M.D. degree from the University of Louisville, Kentucky. His post-graduate work was done in the University of Chicago. Dr. Sid then returned to Houston where he spent his life serving the people of that section.

No man ever lived in that town that was more highly esteemed by his friends than Dr. Evans. He had traits that were peculiar to himself; his friends adored him, his enemies respected him; to his friends he was as loyal and true as Jonathan to David. He was always ready to repay a kindness and quick to resent an injury. He led an active practice at the home of his childhood for 57 years, making professional calls a few days before he died. He never refused the call of a widow or an orphan. His name will live on in the minds of his friends as long as the children of the parents now living in Houston live.

He was a lifelong friend of the writer; we attended our first school together; our medical licenses bear the same date. I knew him well, and to know him was to love him. It has been said that in every crisis of human experience, when the gates of the grave swing back and a great man goes in, that God in His providence raises up another to take his place, but to my mind the question of the hour is, who will take the place of Dr. Sid?

When the last trumpet shall rend the skies
And the dead in Christ arise,
He will burst the fetters of the tomb
And wake in full immortal bloom.

His true friend,
W. C. Walker.

WEST TENNESSEE MEDICAL SOCIETY

The West Tennessee Medical and Surgical Association met at Jackson, Tenn., on June 1. Dr. John Jackson, of Dyer, was elected president and Dr. McSwain re-elected secretary.

The following program was rendered:

"Eye Information for General Practitioners" —Dr. Phil M. Lewis, Memphis; Dr. J. D. Brewer, Dyersburg.

"Acute Nephritis"—Dr. Henry B. Gotten, Memphis; Dr. J. Worrie McElroy, Memphis.

"A Brighter Future for Women" — Dr. Powers.

"Fractures of the Humerus Involving the Shoulder Joint"—Dr. Edwin J. Lipscomb, Memphis; Dr. James McClaran, Jackson.

"Tumors of the Kidney"—Dr. I. G. Duncan, Memphis; Dr. Russell A. Hennsessey, Memphis.

"Some Phases of State Medicine"—Dr. A. F. Cooper, Memphis; Dr. W. L. Williamson, Memphis.

"The Factors that Influence Neonatal Mortality"—Dr. Milton S. Lewis.

"Diabetes and the General Practitioner"— Dr. R. C. Derivaux, Nashville.

The West Tennessee is a fine society. Dr. McSwain is a great secretary. We deeply regret our inability to attend this meeting. Thank you, Dr. McSwain, for the invitation.—Ed.

EXAMINATION FOR NURSES

The Civil Service Commission expects to announce examinations on June 13 for nurse positions in the Indian Field Service (including Alaska,) Department of the Interior. The examinations will cover three classes of positions:

Public Health Nurse, $2,000 a year.

Graduate Nurse (General Staff Duty), $1,800 a year.

Nurse Technician (Bacteriology and Roentgenology Combined), $1,800 a year.

There is especial need for persons **who are able to meet the requirements** for the positions of Public Health Nurse and Nurse Technician.

The announcement will show the requirements. Persons interested in such employment may obtain a copy of the announcement, as soon as issued, from the Secretary, Board of U. S. Civil Service Examiners, at any first- or second-class post office, or from the United States Civil Service Commission, Washington, D. C.

With reference to the above notice of the examination to be announced on June 13 for nurse positions, the closing dates for the receipt of applications will be as follows:

(a) July 18, 1938, if received from states other than those named in (b) below.

(b) July 21, 1938, if received from the following states: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

(c) November 7, 1938, if received from points in Alaska south of the Arctic Circle.

(d) January 9, 1939, if received from points in Alaska north of the Arctic Circle.

—U. S. Civil Service Commission.

PRAYER

We thank Thee for this place in which we dwell; for the love that unites us; for the peace accorded us this day; for the hope with which we expect the morrow; for the health, the work, the food, and the bright skies that make our lives delightful; for our friends in all parts of the earth, and our friendly helpers in this foreign isle.

Give us courage and gaiety and the quiet mind. Spare to us our friends, soften to us our enemies. Bless us, if it may be, in all our innocent endeavors. If it may not, give us the strength to encounter that which is to come, that we be brave in peril, constant in tribulation, temperate in wrath, and in all changes of fortune, and down to the gates of death, loyal and loving one to another.— Robert Louis Stevenson.

Don't argue. Discuss. The difference is, in argument you are trying to outdo the other fellow; in discussion you are trying to get at the truth.

BOOK REVIEWS

The fifth edition of MATERIA MEDICA, DRUG AND PRESCRIPTION WRITING, by Oscar W. Bethea, of New Orleans.

This book is published by the F. A. Davis Company of Philadelphia. Dr. Bethea has dedicated this book to his father and mother. Every doctor in Mississippi knows Dr. O. W. Bethea, or knows of him. He lived in Meridian for a number of years and Mississippians have a personal interest in his wonderful record. If there has ever been a time when the pharmacist and the practicing physician should get together for the good of each it is now. If drugs have a place in the practice of medicine, we should certainly use them as outlined in Dr. Bethea's book. He was a pharmacist before he practiced medicine. He knows the viewpoint of both the pharmacist and the practitioner. Dr. Bethea discusses the history, the action, and the manner of prescribing the drug. Prescription writing is discussed in detail in this book, the dosage, the vehicle, and the amount to prescribe. The entire information on prescription writing is made so plain that the student just out of college or the practitioner who has been out for a half century can take this book and write prescriptions intelligently. The therapeutic action of the drug is described fully. With this book in print and with the campaign on in Mississippi by the Mississippi State Pharmaceutical Association staging a campaign for the use of pure drugs and for prescription writing, it does seem that every practitioner in Mississippi and in adjoining states should think seriously and act in the interest of efficiency and economy for himself by securing a copy of this most valuable book at once. It may be had from the F. A. Davis Company, Philadelphia. The price is five dollars.

INJECTION TREATMENT OF VARICOSE VEINS AND HEMORRHOIDS, by H. O. McPheeters, M.D., F.A.C.S., formerly director of the Varicose Vein and Ulcer Clinic, Minneapolis, Minn, and James Kerr Anderson, M.D., F.A.C.S., instructor of surgery, University of Minnesota School of Medicine.

In this book we have perhaps the most up-to-date and thorough presentation of this recognized and established treatment of hemorrhoids and varicose veins available. Beginning with the basic details of anatomy, etiology, positive diagnosis, then the indications and the contra-indications for the injection treatment, the authors leave nothing unexplained or unillustrated for easy understanding. A chapter on general treatment, including advice about clothing, shoes, habits, constipation and other contributory factors precedes the step-by-step injection treatment. The equipment needed, the actual detailed technique, treatment and after care are so clearly described one could feel no safer at the authors' elbow. Difficulties and complications are discussed fully. The book is illustrated with 82 excellent photographs.

Dr. Anderson says:

"It is the object of this treatise to describe methods whereby a large percentage of persons suffering from hemorrhoids may be relieved of their condition and yet remain ambulant. Approximately 50 per cent can be cured by injection plus some office surgery, and 25 per cent by injections alone, leaving 25 per cent for surgery alone."

Price: $4.50. Published by F. A. Davis Company, Philadelphia.

THE ROMANCE OF PROCTOLOGY, Charles E. Blanchard, M.D., teacher, writer and editor, Youngstown, Ohio.

Dr. Blanchard's title intrigues as he anticipated, and explains: "The afflictions with which the specialty of proctology is concerned represent the price paid by the human race for the advantages of the upright position in the struggle for existence. For countless ages, the human race has been calling for a practical scientist to come to the rescue of those suffering from the pain and discomfort of that price. If answering that call, in the face of scepticism, criticism and opposition does not have as romantic possibilities as disemboweling a dragon, we ask, 'What is romance'?"

This book, aside from its scientific merit, is surprisingly philosophic, its pages rich with historic fact presented in extraordinary readable fashion. The author makes shrewd observations, defining his own independent thinking in a manner distinguished. He tells the story of the history and development of this much neglected branch of surgery from its earliest times. And because there was little or nothing to be told until comparatively modtern times, he picks out the romantic figures of Hippocrates, Galen, Paré, Paracelsus, Metchnikof and makes them live in the light of their own work of pioneering in fields other than the rectal orifice. So he brings from obscurity

Frederick Salmon, Mathews, Mitchell, Brinkerhoff, Albright and others whose work in the field of proctology has developed ambulant proctology, providing relief hitherto undreamed of.

"Nearly all progress in proctology has been made since Frederick Salmon founded St. Mary's Hospital in London in 1835."

Dr. Blanchard's book is reasonable for $4.50, and worthy of a place in every practitioner's office collection. His own methods and technique are given in the last pages. Published by Medical Success Press, Youngstown, Ohio.

Dr. O. W. Bethea's new book should be on the desk of every practitioner in the State of Mississippi, should be used and appreciated.

One of the forgotten women is the practitioner's wife. She neglects her own family often time for the good of others, and she does much for her own family while her husband treats others not so sick, and often times without remuneration, and may be not even gratitude. With patience unsurpassed she is a living sacrifice for others.

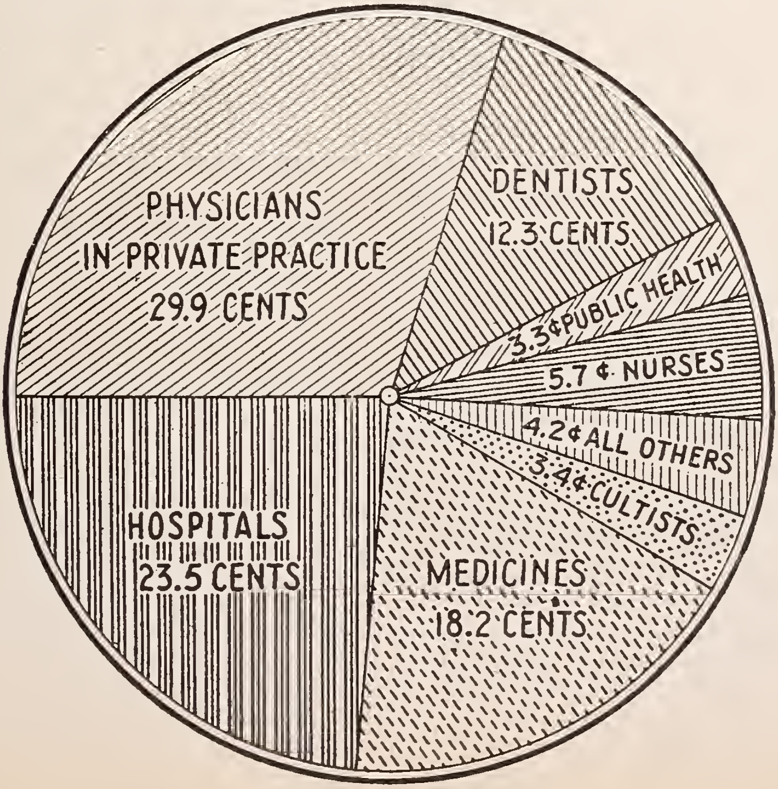
Instead of so much hair splitting on the treatment of advanced carcinoma of the cervix we should concentrate our efforts on precancerous conditions and early diagnosis. To do this the physician in general practice must have an office suitable to examine a patient and have a nurse help him.

It is poor business to tell a patient to go to the drug store, or the grocery store, and get a bottle of medicine. Any ailment that deserves treatment should be dignified with specific instructions with a written prescription.

You will note the ad of The Hospital Service Corporation of Mississippi in this issue of the journal. We deeply appreciate this cooperation. The hospital association is striving to render a service to the people by way of insurance, we believe. The medical profession is not entirely in accord on hospital insurance, but the majority, we believe, think that the best service will be rendered under the direction of the hospital association.

WHERE THE MONEY GOES

From "The Report on the Cost of Medical Care"



MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

Acute Upper Respiratory Infections in Infants and Children*

WILLIAM P. WARFIELD, M.D.
CLARKSDALE, MISS.

Since the coming of better feeding methods the pediatrician has long ago shifted his major interest in practice from the intestinal to the respiratory tract, for these infections constitute the bulk of pediatric, private practice. At this season of the year, their importance increases and for the next few months many of us will be confronted with the problems for which they are responsible.

There is no definition which fully expresses exactly what one means to say in describing these infections, due to the fact that there is a wide range of variation, in symptomatology, localization, and severity. It is of practical value to adopt the working attitude that they constitute a clinical entity with many manifestations and classify them as a coryza, a pharyngitis or a tonsilitis, etc., for discussion only. At the bedside we must think of these localizations as but the starting point of an enormous number of possibilities, both locally, constitutionally and in distant parts of the body. No amount of clinical experience will enable us to prophesy what one of these infections will do in a given instance.

The etiological agent responsible for the common cold still remains unknown. Dochez and his co-workers have presented weighty evidence that a filterable virus is the primary invader. The concensus of opinion today seems to be that the virus is the primary source of trouble, and that the common organisms ordinarily found on cultures from the nose and throat are secondary invaders. Because of their contagiousness, a microbic origin can hardly be doubted. Nose and throat men attach much importance to stasis in the passages. Fresh nasal discharge is slightly antiseptic. Upon standing twenty-four hours, it becomes an ideal culture meduim for bacteria. Anything interfering with the ventilation and drainage of the passages defeats nature's attempt at protection, by causing stagnation of the nasal mucus, which then provides suitable culture medium for micro-organisms.

The primary pathology is a catarrhal inflammation which, by the time of examination, has usually involved the nose, the nasopharynx and all of the visible part of the throat. Nose and throat men agree that in every bad cold in infants and children, we have at least a mild infection of the nasal accessory sinuses, the middle ear and the larynx. Almost invariably, there is present, in young children, a cervical adenitis. The younger the child the less tendency there is for localization. In older children there is more of a tendency for special localization, for example, in the tonsils, the nasopharynx or trachea. When thinking in terms of pathology the appearance of the picture of the allergic membrane should be kept in mind, which, instead of being red is pale, and the tissues have the appearance of being edematous and boggy. In allergy the nasal discharge is always alkaline instead of neutral or acid as with the infections. The nasal smear will show an increase of eosinophils even though the polymorphonuclears of infection dominate the picture.

The incidence of acute upper respiratory infection is far greater than that of all the acute contagious diseases combined and this statement is probably true of the morbidity and mortality as well, though we have no distinguishing characteristic or name to give them, which eliminates accurate statistical data. They may occur sporadically at any time, epidermically and in pandemics. It is not unusual to learn through the newspapers that distant places are having an outbreak of infections similar to the one prevalent at that time in our home town. The periods of greatest incidence are in the early spring and late fall. Changing temperatures always bring large numbers of infections. During constant cold or heat their incidence is less.

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*Read before the Clarksdale and Six Counties Medical Society, Clarksdale, Nov. 10, 1937.

When thinking of these cases in relation to a prevalent epidemic from year to year, it is of much interest to note that the same complication tends to follow in their wake. At one period, the most prevalent extention will be otitis media, when last year, the main cause for alarm was cervical adenitis or appendicitis or the frequency with which many of our cases went into bronchopneumonia. We often note the affinity of given organisms for certain localizations.

By far, the greatest number run a benign course. There is the usual evidence of a cold, a running, stopped up nose, a sore throat, a little aching or soreness. Frequently, there is no outward evidence of an infection at all, and its presence in the child is not revealed until one makes an examination of the throat. It is the exception, rather than the rule, for a child to complain of sore throat unless there is an abscess, diphtheria or scarlet fever. For this reason, many of us omit this very important procedure, for in most cases, it is a difficult one, which may even require wrapping the child securely in a sheet, in order to get a good look. The valuable information gleaned from a thorough throat examination, in children, is well worth any trouble or inconvenience to which we may be put to secure it. Distinguishing an abnormal from a normal throat is an art which few ever fully acquire. One must never prognosticate upon the appearance of a throat. The child with the throat that makes us think of scarlet fever may recover faster than the one so innocent looking that we almost doubt its involvement. If one must give a prognosis. the general appearance of the child is of more importance than the height of the fever and the appearance of the throat.

When acute upper respiratory infections become more serious, they may be grouped clinically into certain types and a given case will show one, or a combination of the following lines of development.

I. Cases with unduly protracted fever.

II. Those which spread by direct extension or the lymphatics to adjacent tissues and organs.

III. Those which become systemic and through bacteriemia or toxemia lead to pathologic changes in almost any part of the body.

Group II or those spread by direct extention or the lymphatics to adjacent tissues and organs, probably has the highest incidence. The most frequent complications are (1) paranasal sinusitis; (2) cervical adenitis; (3) otitis media; (4) catarrhal laryngitis; (5) stomatitis and conjunctivitis; (6) local suppuration; (7) laryngotracheobronchitis. The ethmoid cells and the maxillary sinuses are present at birth. The sphenoid sinuses have developed, sufficiently, by the age of three years to begin to have clinical significance. The frontal sinuses are developed by the fifth year. Some men use the x-ray of the frontals as an index for infection in the other sinuses. It has been shown that if there is infection in the maxillary antrum, for instance, in a child five years of age, the frontals will show poor development. If the infection in the maxillary sinus is cleared the frontals respond and begin to develop. The ciliated cells drive the nasal discharge backward into the pharynx. If there is obstruction to this action, whether it be from tonsils, adenoids, a deviated septum, allergic rhinitis or a foreign body, stasis results and infection follows, since the nasal discharge loses its bactericidal action, whenever stasis occurs for as long as twenty-four hours. Sinus infection seems to be on the increase in children locally. The damp, moist air of the Mississippi Delta and the almost universal use of gas heat, which dries the membranes of the nose and throat, leaving them in a state of poor resistance, after repeatedly being subjected to the atmospheric conditions, may play its part in this pathology. Our attention is called to the sinuses by the failure of a patient to throw off colds in a reasonable length of time, and by the enlargement of the posterior cervical glands. With these findings, if infection about the adenoids, tonsils and teeth can be ruled out, the sinuses should be examined by means of the x-ray and proper treatment begun. Because of the tendency to repeated upper respiratory infections, caused by diseased sinuses and the numerous complications arising from them, every attempt should be made to clear such foci.

As has been said, in every bad cold there is always some involvement of the middle ear, and the drum should be subjected to repeated examinations, in order to recognize an otitis media early. Even the newborn must be examined with the otoscope. Infants, and older children, as well, may have a bulging drum and still show no evidence of pain, others may show every evidence of it, so that our attention is, at once, called to this area. The examination of the ears in children will repay us many times for the difficulty in handling the patient, while trying to view the drum. Familiarity with the normal appearance of the tympanic membrane is essential. The short process and handle of the malleus, the light reflex, color and contour of the drum must be considered. In noticing the color of the drum, whether or not phenol has been used is of importance. This drug, though very useful in treatment, bleaches and gives the membrane an appearance of thickness which is disconcerting at times. Of all the landmarks, the most important is the short process of the malleus. As bulging advances, this process is moved farther and farther from the membrane until it is no longer visible. At this point, if the fever still continues, the drum should be lanced.

With infants, the local anaesthetic is probably best, for it is easy to wrap them in a sheet and limit motion enough for accurate paracentesis. In older children, where this is impossible, a short general anaesthetic with nitrous oxide is preferable.

With the presence of otitis media, we must constantly be on the alert for involvement of the mastoid. It must be remembered that children frequently show no local signs of mastoiditis. Inflammation and tenderness may be entirely lacking and the first evidence of involvement of the central nervous system may be a convulsion due to the pressure on the covering of the brain, or an actual meningitis, which has passed through the mastoid with little evidence of its presence. There is usually a rise in temperature which gives us fair warning of the extension of the infection. But in children, we frequently just notice that the general appearance seems considerably worse. Whenever, for any reason, there is any doubt or evidence whatsoever of mastoiditis, the x-ray must be resorted to, in the hands of an expert, for these plates are notoriously difficult to interpret and the life of our patient hangs in the balance. The early use of the x-ray in competent hands is practically our only means of diagnosing early mastoid involvement in children.

With further extension down the respiratory passages, we are confronted with acute catarrhal laryngitis, or croup and acute laryngotracheobronchitis. All of us are familiar with the croupy child, but few have had the misfortune of seeing a severe case of acute laryngotracheobronchitis. Recently, I saw such a case in a fifteen-months-old child. A tracheotomy was performed and about fifty bronchoscopic treatments were necessary in the course of two weeks. Whenever there is involvement of the larynx, diphtheria must be ruled out. If there is doubt as to its presence, or if the time factor demands it, antitoxin should be administered without hesitation. When the symptoms and signs ordinarily attributed to croup persist in the daytime, we must be on our guard for laryngotracheobronchitis, and with the first appearance of the signs of laryngeal obstruction, which are indrawing at the suprasternal notch, around the clavicles and at the epigastrium, it is imperative that the patient be placed in a hospital, under the constant supervision of one trained in the use of the bronchoscope and competent to perform a tracheotomy. In the case mentioned, it was necessary for the specialist to set up his instruments on the baby's bed and he and the anaesthetist slept in the same room with him, in order to relieve the obstruction at the earliest possible moment. The urgency of the symptoms may become so great that the patient will succumb, during the period of delay ordinarily required to get the operating room ready. In this way, and this way only, was it possible to save the patient's life. Chevalier Jackson, of Philadelphia, who has described a large series of such cases, states that such a course is typical and urges the early use of the bronchoscope with contant watchfulness until the patient is out of danger.

Cases with unduly protracted fever probably fall under the heading of influenza. Aldrich, of Winnetka, Illinois, after studying 1146 seen in private practice over a six-year period, 1930-1936, has recently made some very interesting contributions. The incidence of influenza and upper respiratory infections (as indicated by the diagnosis of pharyngitis) and croup, were carefully graphed covering the same period. It was found that there was no relation between flu and pharyngitis, but that the incidence of influenza and croup coincided exactly. He comes to the conclusion that croup, when seen in epidemic form, is usually a part of the disease rather than a complication. This work indicates conclusively that influenza and common colds are an entirely separate clinical entity.

Aldrich lists the symptoms and observations which should lead to a diagnosis of influenza as follows:

A. **Symptoms and Observations at the Onset.**

1. Chill or chilly sensation.
2. Sudden fever.
3. Red conjunctivae.
4. Normal nasal and pharyngeal membranes.
5. Relatively slow pulse.
6. Toxic symptoms—frontal headache, prostration, malaise, vomiting, anorexia, flushed face, muscular aches in older children only.
7. Leukopenia.

B. **Symptoms and Observations During First Three Days.**

1. Fluctuating fever.
2. Reddening of nasal and pharyngeal membranes.
3. Cough—laryngeal in type.
4. Relatively slow pulse.
5. Coated tongue—often thickly furred with sharply demarcated red rims.
6. Signs or symptoms of complications usually in ears or chest.
7. Modification of the blood count with purulent complications.

C. **Observations Made on General Course of Disease.**

1. Rapid recovery after a few hours, or
2. Prolongation for several days or weeks without demonstrable complications, or
3. Prolongation due to evident complications.
4. Improvement usually associated with a mucous discharge from nose, throat and bronchi and with progressive clearing of tongue.
5. Tendency to relapse following apparent recovery.

In cases which become systemic and lead through bacteremia or toxemia to pathology in distant parts, acute hemorrhagic nephritis, pyuria, cardiac complications, sepsis, arthritis and multiple neuritis represent possible complications.

Among the most interesting and most frequent complications of acute upper respiratory infections are those which point to the gastrointestinal tract. Brenneman, of Children's Memorial Hospital, Chicago, makes the startling statement that more than half of all cases of appendicitis in children follow directly or accompany upper respiratory infections. Evans, of the University of Wisconsin, after studying the incidence of appendicitis in 16,000 students, states that it is eight times more frequent during epidemics of colds than during the interepidemic periods. The connection between the upper respiratory tract and the appendix is of such consequence that appendicitis has been spoken of as appendiceal angina. With these facts in mind abdominal pain during the course of these infections always necessitates the elimination of appendicitis. Besides the pain of appendicitis there are two others, frequently seen, one due to a neuritis and the other to acute mesenteric adenitis. The pain due to neuritis usually appears early and is of a very sharp character and is practically always referred to the umbilicus, that due to mesenteric adenitis usually appears late, may be widely diffused and located anywhere in the abdomen and is of a dull aching character. It is difficult to differentiate acute mesenteric adenitis and appendicitis. If in doubt, the safest course is to do a laparotomy, rather than risk the consequence of a perforated appendix.

Skin rashes, occurring with these infections, are often particularly aggravating, because of the fact that some of them closely approach the one seen in scarlet fever. It may be impossible to differentiate an upper respiratory infection complicated by a skin rash and scarlet fever. However, the appearance of the throat and transient character of the rash is usually conclusive.

A recent article on obstetrics in *The Mississippi Doctor* is interesting, from a prophylactic standpoint. The author states that prophlaxis in obstetrics should begin with the birth of the expectant mother. In pediatrics one must begin prophylaxis against all infections, upper respiratory included, at birth. Proper feeding, the immunizations, the vitamins, sunshine and attention to the endocrine glands, when indicated, are the responsibility of all who care for children. Probably the tonsil and adenoid problem is the most outstanding immediate consideration, when prophylaxis in acute upper respiratory infection is under discussion. The lymphatic tissue of Waldeyer's ring occupies a very strategic position. All the food we eat and the air we breathe must pass the tonsils. It hardly seems reasonable to consider them as purposely additions without function. The most generally accepted theory is that, up to about the fifth year of life, when susceptibility to infection is greatest, the tonsils are active in autovaccination. Lymphocytes invade the crypts of the tonsils, take up the bacteria by phagocytosis and return with them to the lymph nodes where they are destroyed.

In this manner a constantly increasing immunity to infection is built up, so that, by the fifth year susceptibility to infection is markedly diminished. Though there is no absolute proof that the tonsils have a function it seems reasonable from a biologic standpoint to think of them as being useful organs.

Kaiser, of Rochester, New York, and his associates advised 4400 children to have their tonsils removed, about 2200 consented to have the operation. Both groups were followed for a period of ten years. Statistics based on so large a series are of great interest and in his book, *Children's Tonsils In and Out,* Kaiser comes to the following conclusions:

1. The real value of the removal of the tonsils cannot be definitely established in a few years. Apparent benefits during the first few postoperative years are not so evident over a ten-year period.
2. Outstanding benefits are apparent in rendering individuals less susceptible to scarlet fever and diphtheria.
3. Acute head colds and otitis media, though definitely lessened over a three-year period, are not essentially influenced over a ten-year follow-up period.
4. Cervical adenitis is decidedly reduced in tonsillectomized children over a ten-year period.
5. The respiratory infections such as laryngitis, bronchitis and pneumonia not only are not benefited but actually occur more frequently in tonsillectomized children.
6. First attacks of rheumatic manifestations occur about thirty per cent less often in tonsillectomized children. The greatest reduction occurs in children tonsillectomized early. Recurrent attacks are not benefited at all.
7. Incomplete tonsillectomies do not offer the same protection against usual throat complaints and infections as complete removal of tonsils.
8. The late results in 2200 children ten years after operation are evident only in the reduction of sore throats, cervical adenitis, otitis media, scarlet fever, diphtheria, rheumatic fever and heart disease.

Because of their peculiar anatomic relationship, the adenoids present a clinical problem which is completely different from that of the tonsils. Their relationship to the inner end of the eustachian tube is an important factor in the causation of otitis media.

The mere presence of adenoids does not indicate removal, but nasal obstruction and mouth breathing at any age establish the indication if other causes of obstruction can be excluded. Statistics on the removal of adenoids without a tonsillectomy are not available and such a series might prove very interesting in relation to the incidence of upper respiratory infections.

When considering a tonsillectomy the question should be approached from the biological, statistical and individual viewpoints, and the question carefully weighed before advising the operation. The family physician is in the best position to give this advice since he is more familiar with the individual case and can base his opinion upon bedside knowledge of the past history.

The value of cold vaccines in prophylaxis is questionable; at least, they do no harm and seem to lessen the frequency of complications.

The outlook for vaccine therapy is none too hopeful so long as we are in the dark as to the primary cause and the part played by secondary invaders.

The value of cod liver oil rests upon its ability to prevent and cure rickets, and so removes a cause of lowered resistance.

We can supply an adequate intake of vitamin A, which helps to produce healthy mucous membranes and so, indirectly, build up the child's resistance to colds.

Treatment should include rest in bed with constant vigilance for and careful handling of complications. No change need be made in the diet if there is no diarrhea or vomiting. There should be no undue urging to take food. When a diarrhea appears in the infant, radical changes in the diet must be made. With the older child, the omission of fruits and the coarser vegetables is usually all that is necessary. When vomiting appears, fluids must be forced and the carbohydrate intake increased. Aspirin in the dosage of about one grain per year of age is excellent fever medicine. The tepid pack for the higher temperatures is servicable. Nose drops of ephedrin in a watery base are better than those in oil because of the inhibition of the ciliary motion and resulting stasis produced by the latter. Ephedrin hydrochloride in normal saline in ½—1 per cent dilution is very satisfactory. Codein still remains the ideal cough medicine. The combination of codein and copavin has proved useful.

We have heard much of late about sulfanilamide. Its toxicity consists in its ability to convert hemoglobin into forms useless in the transport of oxygen. My experience has been that a leukopenia with a marked drop in polymorphonuclears and a relative lymphocytosis is produced by the drug in therapeutic dosage. There is considerable evidence from various centers throughout the country that the drug is of definite value, though more time is necessary to come to accurate conclusions concerning it. The routine use of sulfanilamide in upper respiratory infections is hardly justified at present.

Placenta Praevia*

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Clarksdale, Miss.

A majority of obstetrical emergencies are entirely preventable; but this is one of those that comes under the class of unpreventable.

I am not trying to bring you anything new relative to this subject, but shall endeavor to refresh your memory along the line of the best procedure to follow should you have one of these emergencies to meet.

Placenta praevia is a form of ectopic pregnancy in which the development of the placenta comes either partially or wholly within the zone of the dilatation of the uterus. It is a condition that has been found and described by medical men since the days of Hippocrates. It was noted and mentioned by Mauriceau, Deventer, Pugh, and others who attributed its cause to a prolapse of the placenta from its normal insertion in the uterus. It was recognized and stated as a fact, in 1664 by Paul Portal, that the placenta may be implanted over the os uteri and Roederer, Levert, Gifford, and Smellie emphasized the fact.

The placenta may be attached to any portion of the uterus, the posterior wall being the most frequent site, the anterior wall next, then the sides, rarely the fundal portion, and lastly the lower uterine segment—the isthmus of the uterus. To be a normal condition, the insertion of the lower border has to be not less than ten (10) centimeters from the internal os—well above the upper border of the isthmus. When the insertion is lower than this, it is classed as placenta praevia and is divided by a majority of the authorities into three (3) types: marginal; lateral; and central.

Marginal placenta praevia is that condition in which the placenta encroaches into the dilating zone, but does not reach the periphery of the internal os.

Lateral or partial placenta praevia is the class in which the placenta covers a part of the internal os.

Central or total praevia is that condition in which the placenta is planted directly over the internal os.

The above classification is only relative, however, for when dilatation takes place, the digital findings produced by it may reveal a placenta lateralis as a marginalis and a placenta praevia totalis that seemed to cover the internal os several fingers breadth, may cover it the breadth of one finger only.

Due to the fact that statistics from various parts of the world are so variable as to the occurrence of this condition, giving as their findings an occurrence of one in three hundred cases to one in fifteen hundred cases, the incidence of this obstetrical complication is hard to determine; however, it does occur ten times more frequently in multipara than in primipara and in general, once in one thousand cases. The central type occurs in less than one-fifth of the cases reported, but multipara were more prone to this variety and the tendency to this type increases with multiparity and with age.

The exact cause or determining factor which brings about nesting of the ovum and placentation in any particular area in a strictly physiologic pregnancy is not known; but there are theories advanced to explain the descent of the ovum into the uterus and the ultimate nidation thereof, either on posterior or on anterior walls that run the gamut from gravity to a belief that there is a peculiar suitability of the mucosa to arrest the descent of ovum and also for its growth at these points. Be all of this as it may, authorities have, as a result of Hofmeier's study, classified the causes of placenta praevia into two groups: (1) indirect or contributary causes; (2) the direct or active causes. While no one has been able to prove that a diseased endometrium has been a factor in causing normal nesting more difficult and more possible in lower uterine segment, we do know that a history of endometritis has been very frequent in women with this condition. It is a well recognized fact that uterine inflammations predispose to relative sterility. With the increase in age and multiparity, there is also greater possibility of uterine disease—hence age and multiparity are predisposing factors. Subinvolution and twin pregnancies have both been considered as indirect causes.

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*Read before the Clarkdale and Six Counties Medical Society, Clarksdale, March 24, 1937.

In the so-called direct or active causes, there are only three that may be classed as valid: gravity, overgrowth of the placenta, and reflexa placenta.

As the impregnated ovum descends into the uterine cavity, it reaches a spot favorable for nidation and, whether this spot be one rich in vascularity, succulence of the edematous endometrium, favorable convolution of the rugae, or what not, its progress is arrested and, as the mucosa of the lower uterine segment is included in the decidual reaction, it is reasonable to believe that the ovum is not arrested until it reaches this area in the lower zone. Now, while this may explain the low implantation of the ovum, still it does not explain why the placenta should cover the internal os. This may be explained by the fact that the decidua splits, crowding over the internal os and permitting the cotyledons to become fixed on the other side. Now, this decidual splitting is a very common occurrence in normal placentation, and it is reasonable to suppose that it also occurs in this condition thus producing a complete placenta praevia.

Overgrowth of the placenta is claimed to be an active cause of the condition as a result of defective vascularization of the decidua. When the ovum is arrested in the lower uterine segment, there may be a condition present in which the cotyledons cannot obtain sufficient nutriment from the vessels at site of nidation and, as a result thereof, spread out to obtain the necessary blood supply. Now, why it should not just grow upward and not downward is hard to explain, but the aforementioned gravity may be the causative factor. Those of you who have examined the normal placenta, can vouch for the fact that it is thick and vascular with a relatively small area of uterine attachment, while those that are very thin and very large, as are these placentas we find in praevia, show a very extensive maternal surface.

Reflexal placenta, as shown by Hofmeier and Kaltenbach in 1888, gives a most unchallengeable explanation for the production of placenta praevia, and the theory is this: you have a low implantation of the ovum which becomes completely enveloped by the decidua reflexa. Now, whether it be due to some pathologic alteration of the mucosa, to insufficient blood supply, or to the fact that some of the cotyledons which ordinarily disappear when the chorion laeve atrophies remain, are attached to the reflexa, and continue to grow, is the question; but it is very likely that each plays its part. The ovum enlarges and, as it does, the cotyledons attached to the decidua reflexa hypertrophy with those of the chorion frondosum and eventually the reflexa portion encroaches on the lower uterine segment and may cover the os. As time goes on, the cotyledons adherent to the reflexa become adherent to the decidua vera, as occurs normally in the upper uterine segment without there being cotyledons within the reflexa. Then again, the cervical canal might contain decidual tissue and, if so, it would be possible for the reflexal placental tissue to be grafted thereon. This description shows how the placenta bridges the os, but it is merely a theory.

There is but one subjective symptom. Uterine hemorrhage occurring in the last three months of pregnancy if it be painless and causeless is practically pathognomonic of placenta praevia. A woman may go to bed at night feeling as well as usual and awaken the following morning in a pool of blood. This hemorrhage may vary from a few drops to a fatal hemorrhage; but, as a rule, a few ounces is all that is lost as an initial symptom. Any woman in the last three months of pregnancy wno notices a painless hemorrhage, be it ever so small, should at once consult a physician for the hemorrhage is sure to recur sooner or later if a praevia is present, and it might be fatal next time. The hemorrhage in praevia centralis occurs earlier and is more profuse than in other varieties; but, in exceptional cases, hemorrhage has not occurred until the women goes into labor. Marginal praevia is, at times, not recognized when the women is delivered, due to the fact that the dilating wedge presses it against the uterine wall and thus, by this compression, stops the flow of blood.

Placenta praevia affects the course of pregnancy, labor and the puerperium. There is no doubt that some cases of abortion are due to this factor.

Malpositions and malpresentations are very common due to the fact that the placenta occupies the lower segment and the foetal head cannot at times become engaged. The deliveries are usually operative due to the urgency of emptying the uterus in order to control the hemorrhage. Postpartum hemorrhage is a common complication due to the thinness of lower uterine segment and its inability to contract and compress the torn blood vessels. Manual removal of the placenta is necessary at times in order to check hemorrhage and also because of its adherence to the uterine wall.

Then again these patients may have a serious infection the result of operative intervention, the retention of pieces of placenta which become infected, and lowered resistance resulting from the loss of blood.

The diagnosis is practically made when one is presented a pregnant patient, say in the last months of pregnancy, who has had a painless causeless uterine hemorrhage in which no clots are present. Vaginal examination, revealing a soft, boggy lower uterine segment with a partially dilated cervix, through the opening of which may be felt the membranes or the placenta corroborates the diagnosis. All aseptic precautions should be taken in making the internal examination for a dangerous bleeding may result. One should therefore be prepared for such an emergency before making this examination. Of course, one has to rule out the other sources of bleeding such as polyps, varicosities, the bladder, and cancer of the cervix. This is usually done very readily and should not be neglected.

Differential diagnosis between praevia and abruptio placenta is hard to make and especially is this true as regards those borderline cases of high lateral placenta praevia from those low placental implantations with ablatio if the border of the placenta is not palpable. The pain in the latter, together with the shock, blood clots, and serum are valuable diagnostic signs. You can differentiate the condition postpartum by the space of membranes between the opening in the chorion and the placenta. In placenta praevia, you will find the lower border of the placenta crushed while it will not be so in abruptio.

Placenta praevia is a very serious and very formidable complication of pregnancy and many mothers and children are sacrificed as a result of it each year. The maternal mortality in this complication varies in different localities in any particular country and also in different countries. A mortality report as compiled by DeLee, of Chicago, from twenty different sources, varied from one to nineteen per cent maternal mortality and from ten to eighty per cent foetal mortality. Irrespective of these statistics which are hard to evaluate, the prognosis will depend upon the individual case, such as the condition of the patient, the type of praevia with which you have to deal, duration of pregnancy, surroundings of patient—whether she is at home or in a well equipped hospital and lastly, but not least, the ability and the skill of the attending physician. Most of maternal deaths are due to hemorrhage, rupture of lower uterine segment, and puerperal septicaemia. Forcible dilatation and extraction of the foetus through an incompletely dilated cervix are responsible for ruptured uterine segment and later on for a good majority of the cases of septicaemia. The foetal deaths, as a rule, are due to asphyxiation, to the fact that they are used as a tampon to stop hemorrhage as in Braxton Hicks version, to prolapse of the cord, prematurity, or injury received during extraction.

There are fortunately, in this serious complication of pregnancy, certain methods of treatment that do not prevail in other obstetric complications. Every case, though, should be individualized due to certain factors: the surroundings of the patient; the degree of the praevia; whether the patient either is or is not in labor; the amount of cervical dilatation; the viability or nonviability of the foetus; the condition both of mother and child; the necessity for religious reasons of preserving the child; and lastly, the skill of the accoucher. If at all possible, the woman should be placed in a hospital at once irrespective of the plan of treatment that is to be used. If she is in the country and has to be transported for any great distance, her attending physician should, after thorough preparation of the parts, pack her tightly, preferably with pledgets of cotton soaked in some antiseptic solution such as 1% cresol or 2% merurochrome. This will stop the hemorrhage and, at the same time, bring about cervical dilatation. The packing should never be left in longer than twelve hours. In this day of good roads, automobiles, and an increased number of good hospitals, it is very easy to put these patients in a hospital; but, of course, it is impossible to have every patient so placed and, in the event that this is the case, the attending physician will perforce of necessity, do the best he can under the circumstances.

The following are the methods of treatment to have our consideration and, from these, the one best suited to the circumstances and conditions is to be chosen:

(1) Watchful Expectancy.
(2) Vaginal Tamponade.
(3) Rupture of Membranes.
(4) Voorhees Bag.
(5) Braxton Hicks Version.
(6) Caesarian Section.

Should any watchful waiting be done, it should be in a hospital with the patient flat on her back. This method should be considered only when the bleeding is very slight and is arrested when the patient is in bed and when those interested most are desirous of having a live child and patient is not far enough advanced in pregnancy for the foetus to have reached the state of viability. The patient and family should be warned of the seriousness of the condition, and those in charge at the hospital should have everything ready for an emergency. This plan has no place in the treatment of placenta praevia where the foetus has reached viability. In my opinion, vaginal tamponade has no place in the treatment of placenta praevia at all in view of the fact that we have others that are far better and safer both for the mother and the child. It should be used only in an emergency, as I have stated before, where the patient is a good distance from the hospital and is to be transported to one.

Rupture of the membranes, in selected cases, such as high lateral praevia and also those cases in which the placenta is near the internal os, is without a question, one of the safest procedures both for the mother and child and is especially desirable should the presenting part be the breech. This method also does very well in a normal vertex, but should not be used in a face or a brow presentation. It is also contra-indicated in transverse presentation and in contracted pelvis.

After preparations for delivery are made and the vagina is filled with some antiseptic solution, such as 2% mercurochrome, the membranes are then ruptured in the usual manner and the liquor amnii allowed to drain off. You can then either await spontaneous delivery of foetus or, if you think necessary, can apply low forceps if it be vertex or do an extraction if it be a breech. Extraction by either method should be done slowly.

The Voorhees bag has been used in praevia for years and with very good results. After antiseptic preparation of the vagina has been made, either the membranes are ruptured or, if the placenta covers tne os, it is penetrated and the bag is then passed within the amniotic sack. The bag should then be filled with either sterile saline or sterile water and a weight of about two pounds attached by a string to stem of bag and suspended nearly to floor. Some accouchers insert the bag extra ovular claiming that by this method they have the bag of waters remaining should they have to do a version, but I believe this to be a bad practice due to the fact that the bag lies in contact with the internal mucosa and increases the risk of infection, whereas if it be introduced within the membranes, the area of contact is removed when the placenta is expelled. As most cases of praevia have some cervical dilatation when you see them, there is usually no difficulty in introducing the bag.

The accoucher should watch carefully the amount of dilatation produced and when he finds that the bag is about to be expelled spontaneously, he should remove it at once under anaesthesia and do an internal podalic version. This is done to prevent a fatal hemorrhage which cometimes occurs after the use of the bag. One can then wait for spontaneous delivery as there is no necessity for a rapid extraction as you have a plug pressing the placenta against the wall of uterus.

In 1868 Braxton Hicks advised the use of the following methods which to this day bear his name although it was first used by Wright in 1854. There must be enough dilatation of the cervix to admit two fingers which are introduced through the cervix, on through the membranes or through the placenta should it cover the internal os, and using the external hand to press downward on the fundus uteri, the fingers are made to grasp a foot, which is not always easy to do, and bring it down through the cervix thereby causing the breech to tampon the placental site. Should there be any bleeding after this is done, all that one has to do to check it is to pull down on the foot and cause the plug to fit more snugly. Labor is allowed to proceed along the usual course and is, as a rule, spontaneous. No extraction should be attempted until dilatation is complete. Of course, the patient is anaesthetized for this procedure just as she is later on for the extraction. When one is thoroughly acquainted with this method and it is properly used, it is highly efficient and compares favorably with the bag method as regards both maternal and foetal mortality. Braxton Hicks' method and the bag method, followed by podalic version allowing delivery by the natural forces, are the two obstetric methods of treatment of placenta praevia. Of course, one sees cases of placenta marginalis and high lateralis in which the dilating part, be it vertex or breech, acts as a tampon thereby controlling the hemorrhage and letting labor continue normally to a spontaneous delivery. These cases should be left severely alone.

When the foetus has not advanced as far as the thirty-second (32) week, the above obstetric measures are the methods of choice no matter what degree of praevia you may have, but from the thirty-second (32) week on, the foetus either live or dead, the surgical procedure of Caesarian section, either the low-laparotrachelotomy or the classic is advised. Of course, it is taken for granted that the patient is in a properly equipped hospital and in the hands of one competent to do this class of work. There is no doubt that the most certain way to empty the uterus, control hemorrhage during delivery, and prevent post-partum hemorrhage is by means of Caesarian section to be followed, if necessary, by blood transfusion. The dictum, that the patient is not a good Caesarian risk if she has either been repeatedly examined per vagina or is likely already infected, is by some men disregarded in this class of cases and their statistics show a much lower mortality even with this complication than is shown by those using the usual obstetric measures. Should one be convinced there was an infection present, a radical Porro should be done as this will give the patient a far better chance of recovery than she would have otherwise. Of course, one would take into consideration the relative chances of recovery by either method if there were no other living children; but, if he was positive there was a severe infection, he would disregard this question altogether and proceed to do a radical Porro.

Either the classic, the low, or the radical Porro can be done under infiltration anaesthesia if this be necessary to eliminate any further serious risk to the patient. The statistics from the Chicago Lying in Hospital, for a series of 118 cases of placenta praevia, was 2.6 maternal mortality. There were three deaths in this group in which one followed spontaneous delivery and two occurred after version and extraction. In the forty-two cases of Caesarian in this series, there was not a single maternal death, hence the mortality in the so-called conservative methods was 3.9% while in the Caesarian series it was nil.

Some men advocate section for all patients either with central or partial praevia irrespective of whether the baby is viable or non-viable, living or dead. This radical procedure, however, is a very debatable question.

After delivery of the foetus, the danger of post-partum hemorrhage is very great and all possible means should be taken to prevent this serious complication. Should it occur, the best measure to control it is by packing as tightly as possible, the vagina, and then giving the patient a transfusion.

RESUME:

(1.) Every case of placenta praevia should be in a hospital if possible.

(2.) Watchful waiting has no place in treatment.

(3.) The Voorhees bag followed by podalic version or Braxton Hicks method are the obstetrical methods up to thirty-two (32) weeks.

(4.) Caesarian section in all cases after the foetus is thirty-two (32) weeks or over.

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Papers and news material for publication should be received not later than the fifth of the month preceding publication.

The editors are not responsible for statements made by any contributor.

Manuscripts and all material for publication should be addressed to the editor, P. O. Drawer 231, Vicksburg, Mississippi.

EDITORIALS

THE LOUISIANA-MISSISSIPPI OPHTHALMOLOGICAL AND OTOLARYNGOLOGICAL SOCIETY

This society was organized in 1936 to fill the gap between the eye, ear, nose and throat sections of the state medical associations and the national organizations. The organization meeting was held in New Orleans and Dr. J. Raymond Hume of New Orleans was elected first president. Dr. Millard F. Arbuckle of St. Louis was the guest essayist, and he lectured on "Intra-orbital Problems." The second meeting was held in Vicksburg. The essayists were Dr. Meyer Wiener of St. Louis, who lectured on "The Lacrimal Sac"; and Dr. John J. Shea of Memphis, who lectured on "The Modern Conception of Petrositis." Dr. Chas. A. McWilliams of Gulfport served as second president. The third meeting was held in New Orleans, April 30, preliminary to the meeting of the Louisiana State Medical Association. The guest essayists were Dr. Albert L. Brown of Cincinnati, who lectured on "Affections of the Paranasal Sinuses Involving the Optic Nerve;" and Dr. Arthur M. Alden of St. Louis, who lectured on "Deep Neck Infections." The present officers are Dr. Francis LeJeune, New Orleans, president; Dr. D. C. Montgomery, Greenville, vice-president; Dr. Edley H. Jones, Vicksburg, secretary-treasurer; Dr. Henry N. Blum, New Orleans, Dr. William B. Clarke, New Orleans, Dr. George. E. Adkins, Jackson, Dr. B. S. Guyton, Oxford, councilors. The society voted to hold its next meeting at Gulfport on the Monday preceding the Mississippi State Medical Association meeting of 1939.

The program of the society is limited entirely to the two lectures of the guest essayists; each lecture is 60 to 90 minutes long and is followed by a full round-table discussion. The society prefers to get away from the stereotyped program papers and the program committee attempts to select outstanding men who lecture on interesting clinical problems.

The objects of the society are three-fold: first, scientific instruction; second, (and very important), fellowship between the leading ophthalmologists and otolaryngologists of Louisiana and Mississippi; third, to encourage the younger men to better prepare and to further advance themselves in the study of their specialty.

To be eligible for active fellowship in this society a candidate must have graduated from a recognized medical school, passed his state board, practiced in his state not less than two years, be a member of his county or parish medical society, of his state medical association, of the American Medical Association and have passed either the American Board of Ophthalmology or the American Board of Otolaryngology.

Editorially speaking, we feel that this is a very worthwhile effort and that it can be given the recognition and support of the medical profession.—A. C.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION: Seventy-Second Annual Session and Thirty-Sixth Annual Session of the House of Delegates, Gulfport, May 9, 10, 11, 1939.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday, each month, Natchez, 7:30 p. m.

Amite County Medical Society: W. S. Stewart, Oskya, president; D. H. Thornhill, Crosby, secretary. Meets second Thursday, each month with Wilkinson County Medical Society, Field Memorial Hospital, Centreville.

Central Medical Society: J. T. Rainer, Yazoo City, president; Lawrence W. Long, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. D. House, Sledge, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: William P. Warfield, Clarksdale, president; N. C. Knight Clarksdale, secretary. Meets second Wednesday each month, Alcazar Hotel, Clarksdale, 12 noon.

Coast Counties Medical Society: W. W. Lake, Pass Christian, president; D. L. Hollis, Biloxi, secretary. Meets first Wednesday, each month at night.

Delta Medical Society: C. W. Patterson, Rosedale, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

Desoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4, Memphis, secretary. Meets first Monday of January, April, June, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Harrison, Philadelphia, president; Bob A. Cameron, Meridian, secretary.

Franklin County Medical Society: C. A. Everett, Bude, president; L. Costley, Meadville, secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: B. B. Martin, Jr., Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Mississippi State Charity Hospital, Vicksburg, 7 p. m.

Marshall County Medical Society: C. R. Senter, Byhalia, president, Herbert Phillips, Holly Springs, secretary. Meets second Thursday each month, alternating between Byhalia and Holly Springs.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary.

North Mississippi Medical Society: R. M. Adams, Ripley, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen Counties Medical Society: Dr. R. J. Brown, Iuka, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September, December.

Pike County Medical Society: E. M. Givens, McComb, president; T. Paul Haney, Jr., McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Sunflower County Medical Society: U. S. Wasson, Moorhead, president; H. B. Cottrell, Indianola, secretary.

Tallahatchie County Medical Society: G. Lacy Biles, Sumner, president; G. D. Hightower, Webb, secretary.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: R. B. Zeller, Hazlehurst, president; J. C. McGuire, Hazlehurst, secretary. Meets June 14, Walthal Hotel, Tylertown; September 13, Riverside Hotel, Monticello; December 13, Whitworth College, Brookhaven, 12:30 p. m.

Webster County Medical Society: E. F. Arnold, Bellefontaine, president H. K. Curry, Eupora, secretary.

Wilkinson County Medical Society: C. E. Catchings, Woodville, president; E. M. Butler, Centreville, secretary. Meets second Thursday, each month, with Amite County Medical Society, Centreville.

Winona District Medical Society: T. J. Brown, Grenada, president; S. B. Caruthers, Grenada, secretary.

COURSE IN PEDIATRICS

A lecture and clinic course in pediatrics, designed primarily for those not specializing in pediatrics, is to be held three evenings at 7:30 p. m., June 20, 21 and 22, at The King's Daughters Hospital, Greenville.

This short course is fostered by the Commonwealth Fund, and is under the supervision of Dr. George M. Lyon. The subjects to be considered are:

Problems of the Newborn.
Infant Feeding.
Important Lllnesses in Infants.
Perplexing Pediatric Problems.

It is expected that local doctors will have a number of actual cases ready for consideration.

All doctors of Washington and adjoining counties are invited. No fee will be charged.

Greenville, June 2, 1938 J. A. Beals.

STATE BOARD OF HEALTH

Four scholarships to Tulane University Medical School were awarded by the Commonwealth Fund of New York to Mississippi medical students.

The awards went to Charles A. Patterson of Brookhaven, a 1936 graduate of Mississippi College; Lee Roy Murphree of Okolona, a student at Millsaps College; William I. Hunt of Greenville, a graduate from Southwestern in 1934; and Robert A. Carsley of Clinton, who was graduated from Mississippi College in 1937 and is now doing graduate work at the University of Richmond.

Beginning in September each of the students will be allowed $1,000 annually until graduation from the medical school. In return each student must agree to practice medicine in rural Mississippi communities for at least three years.

On April 5, Dr. Felix J. Underwood and Dr. J. A. Milne left for Washington, D. C., to attend the meeting of State and Territorial Health Officers and State and Provincial Health Authorities. Dr. Underwood was elected president of State and Provincial Health Authorities to succeed Dr. R. H. Riley of Baltimore.

Other officers elected are: Dr. J. T. Phair of Ottawa, Canada, vice-president; Dr. A. J. Chesley of St. Paul, Minnesota, secretary and treasurer; Dr. R. E. Wodehouse, deputy minister of the department of pensions and public health of Canada; Dr. F. C. Trotter, Honolulu, Hawaii, Dr. A. T. McCormick, Louisville, Ky., members of the executive committee.

Dr. Underwood is chairman of the Committee on Child Hygiene of State and Provincial Health Officers, of Maternal and Child Health of State and Territorial Health Officers, and of the Yellow Fever Committee of State and Territorial Health Officers.

Dr. Underwood and Dr. Milne also attended a Conference of the Federal Children's Bureau.

Dr. H. N. Waggoner of Clarksdale, Dr. W. E. Noblin, Jr., of Jackson, and Dr. Robert M. Seawright of Flora have just completed one month's postgraduate study at Vanderbilt University Clinic in the Management and Diagnosis of Syphilis.

Dr. H. A. Kroeze, director of Sanitary Engineering, and Mr. C. M. Ledbetter, assistant engineer, attended the Southeastern Section of the American Water Works Association in New Orleans, April 25-28.

Dr. J. W. Dugger, director of Industrial Hygiene and Factory Inspection, has completed during April an inspection tour of eighty-four factories employing women and children. These factories were inspected for safety, sanitation, ventilation, lighting, and the like.

Miss Mary D. Osborne, supervisor of public health nursing, attended the biennial convention of the three national nursing organizations, the American Nurses Association, the League of Educational Nursing, and the National Organization for Public Health Nursing, in Kansas City, April 25-28, where she took part in the round-table discussion on midwifery.

National Negro Health Week, April 3-10, was marked by observance in fifty-six counties throughout the state, a special supplement being published by the "Negro News Weekly" to which staff members of the Board of Health contributed. This supplement was sent to 12,000 colored people throughout the state.

During Negro Health Week, staff members of the Board of Health made numerous addresses to colored audiences in the state. Dr. H. C. Ricks addressed students at both Alcorn and Campbell Colleges on syphilis control. Dr. J. A. Milne spoke at Campbell College on child health, while Dr. A. L. Gray talked on syphilis control at both Piney Woods school and the negro school in Newton.

On April 4-5. Dr. Felix J. Underwood attended the meeting of the State Board of Examiners for Nurses. Dr. Underwood is president and Miss Mary H. Triggs, Greenwood, is secretary-treasurer of the Board.

At the suggestion of the Commonwealth Fund, Mr. Louis Feldman, new statistician in the East Alabama Health Department, is observing work in Jones County. The Commonwealth Fund asked that Mr. Feldman be extended the privilege of study in the Mississippi county in order that he might secure field experience in a well-organized unit.

Dr. A. L. Gray, director of preventable disease control, gave blood tests for syphilis to students at Piney Woods school April 11.

Dr. H. B. Cottrell, supervisor of field unit, and Miss Ora Phillips, nurse advisor of this unit, are observing the health program in Gibson County, Tennessee, during May. Dr. W. C. Williams, state commissioner of public health in Tennessee, invited them to make this inspection.

On April 15, Dr. Jackson R. Sharman, director of health and physical education, University of Alabama, visited the State Board of Health. During the meeting of the Mississippi Educational Association, he addressed the Health and Physical Education Section banquet, which Dr. Underwood attended.

The State Board of Health will hold examinations for license to practice medicine at the New Capitol, Jackson, June 22-23, Dr. R. N. Whitfield, assistant secretary of the Board has announced.

Examinations on the first two years of medical training will be given June 22 and on the last two years, June 23.

Certificates or diplomas for verification must be given to Dr. Whitfield before the candidates can be examined.

On April 25, Dr. Underwood attended a meeting of the Board of Scientific Directors, Rockefeller Foundation, New York City. This is the first meeting of the directors since Dr. Underwood was elected to the group last November for a three-year period succeeding Dr. W. S. Leathers of Vanderbilt University, former Mississippi health officer.

The Fellowship Club composed of the personnel of the State Board of Health central office held its semi-annual social occasion Saturday, April 30. The event took the form of a picnic at the American Legion Lake near Jackson.

Effective May 1, Dr. H. C. Ricks became director of the state hygienic laboratory succeeding Dr. T. W. Kemmerer, resigned. Dr. J. A. Milne succeeded Dr. Ricks as director of county health work.

Dr. Kemmerer is retiring from active work and will devote his time to private research and travel.

In the Rural Health Conservation Contest conducted annually by the U. S. Chamber of Commerce in co-operation with the American Public Health Association, Pike County has been announced as this year's winner in the Southeastern division. Dr. T. Paul Haney, Jr., is director of the Pike County Health Department.

Two other Mississippi counties, Coahoma and Lauderdale, also won awards of merit.

Many points are used in grading a county competing in the contest, among them these:

1. The extent to which the water supply is protected.
2. The point at which sanitation has advanced in rural homes.
3. The safety of the milk supply.
4. Adequate care of prenatal cases.
5. Medical supervision of infants.
6. The availability of well-trained nursing service.
7. The degree in which local physicians and dentists aid in the public health program.
8. Activities to control tuberculosis and syphilis.

At the State Dental Association meeting held in Meridian, April 25, 26, and 27, Dr. W. R. Wright, dental member of the State Board of Health gave a report of activities, and Dr. J. A. Milne, director of maternal and child health, outlined five important phases to be considered in a sound dental health program. In conjunction with the meeting of the Dental Association, the tenth annual meeting of the Dental Hygienists Association was also held. Miss Gladys Eyrich, is state supervisor of dental hygiene.

The Mississippi Public Health Association will hold its third annual meeting in Jackson, December 8-9, with headquarters at the Robert E. Lee Hotel. Date, program and speakers for the convention were chosen at a meeting of the executive committee held April 30. H. A. Kroeze, director of sanitary engineering, State Board of Health, is president of the Association; Dr. F. M. Smith, Warren County health officer, vice-president; and Dr. J. A. Milne, director of county health work, secretary and treasurer. Section chairmen form the executive committee as follows:

Dr. D. V. Galloway, Meridian, administrative; Mrs. Ella M. Sayle, McComb, public health nursing; R. H. Riggin, Tupelo,sanitary engineering; J. C. Register, Jackson, laboratory; Miss Emily McQueen, Cleveland, mouth health; Mrs. A. M. Jones, Jackson, vital statistics; and Mrs. Georgia B. Stewart, Jackson, clerical.

A conference on investigation and control of rabies called Dr. H. C. Ricks to Montgomery, Alabama, the latter part of April where he talked with Dr. Charles N. Leach of the International Health Division, Rockefeller Foundation. Dr. Leach has been conducting an investigation of the control of rabies in Alabama under the direction of the Foundation.

On April 5, Dr. Underwood attended a dinner meeting of the Hinds County Red Cross Chapter which was given to celebrate the birthday of the organization.

On April 20, a cordial welcome was given by the Mississippi State Board of Health to Dr. Frederick V. Stricker, state health officer, Portland, Oregon. Dr. Stricker was accompanied by Mrs. Stricker.

On April 21, Dr. Underwood conferred with Dr. C. St. C. Guild of the Committee on Tuberculosis among Negroes, with regard to the Negro tuberculosis problem in Mississippi. Dr. Guild is affiliated with the National Tuberculosis Association, New York City.

On April 22, Dr. Underwood addressed the Alpha Epsilon Delta Medical Fraternity at Millsaps College, an honorary fraternity of pre-medical students, on the subject, "Our Syphilis Problem."

Dr. C. C. Applewhite, surgeon with the U. S. Public Health Service, Chicago, and former Mississippi physician, has compared Mississippi's results in public health per dollar spent with those of other states and finds them remarkably high.

In recent comment on tuberculosis and syphilis work in this state, Dr. Applewhite declares that the cost in tuberculosis work per patient x-rayed in other states is $4.29, per specimen 31 cents; while in Mississippi these figures are $3.54 and 13 cents respectively. The examination for syphilis costs 73 cents in other states and 46 cents in Mississippi.

"These figures in a way confirm a statement often made by me that Mississippi gets more public health results for the dollar spent than any other state in the Union," Dr. Applewhite said.

Staff members and most of the personnel of the Board of Health attended the Hygiene and Public Health Section of the Mississippi State Medical Association in session April 19. Dr. H. C. Ricks, chairman of this section, was succeeded by Dr. N. C. Knight, director of the Coahoma County Health Department.

At the meeting of the Mississippi State Pediatric Society, Dr. Underwood spoke on "The Immunization Problem in Mississippi."

Dr. J. A. Milne and Miss Gladys Eyrich attended the meeting of the American Association for Health and Physical Education in Atlanta, Georgia, April 20-23.

The Board of Health radio program over WJDX during April was as follows:

April 2.—Dr. Felix J. Underwood, "Health Progress Among Mississippi Negroes."

April 9.—Dr. D. L. Anderson, "Tuberculosis in Negro Servants."

April 16.—Dr. T. Paul Haney, Jr.,—"Infant Care."

April 23.—Dr. J. A. Milne, "We, the Children."

April30. —Dr. Felix J. Underwood, "The State's Responsibility for Child Health."

Jackson, Felix J. Underwood,
May 5, 1938. Executive Officer

CENTRAL MEDICAL SOCIETY

The Central Medical Society held a Presidential Meeting and celebration, honoring president-elect J. P. Wall of the Mississippi State Medical Association and president J. T. Rainer of the Central Medical Society, at the Robert E. Lee Hotel Roof, Tuesday, May 3. The members from Yazoo City furnished the program:

Remarks by members of the Society.

Introduction of the President-Elect of the Mississippi State Medical Association, Dr. J. P. Wall, Jackson.

Introduction of the President, Dr. J. T. Rainer, Yazoo City.

Eclampsia.—Dr. A. A. Aden.

Discussion by Drs. H. E. Frizell and W. D. McCalip.

Sodium Pentothal As A Short General Anaesthetic.—Dr. Gilruth Darrington.

Discussion by Drs. S. S. Mounger and H. R. Shands.

Toxemias of Pregnancy.—Dr. J. B. Anderson.

Discussion by Drs. R. C. O'Ferrell and J. W. Lipscomb, Jr.

There was a meeting of the executive committee at 6:00 p. m. and supper was served at 7:00 p. m.

It was announced that the "Tulane Meeting" would take place June 7th.

Jackson, Lawrence W. Long,
May 1, 1938. Secretary.

COAHOMA COUNTY MEDICAL SOCIETY AND CLARKSDALE HOSPITAL MEDICAL STAFF

The Coahoma County Medical Society and Clarksdale Hospital Medical Staff met in the Alcazar Hotel, Clarksdale, April 13, at 12 o'clock for a luncheon meeting. During the luncheon Dr. Brandon talked regarding examination of the boy scouts for camp this summer and asked the physicians to do a very thorough examination instead of the superficial examinations that had been done in the past. A motion was made, which was duly seconded and passed that this would be done and a minimum fee of $3.00 would be charged, and appointments for examinations would be made. The county health officer agreed, upon request of the medical society, that he would not do these examinations.

After lunch the meeting was called to order by the president. The secretary's minutes were approved as read. There being no further business a motion picture entitled "Diagnosis of Urologic Conditions" was shown.

The society then adjourned.

Clarksdale, N. C. Knight,
April 27, 1938. Secretary.

COAHOMA COUNTY MEDICAL SOCIETY AND CLARKSDALE HOSPITAL MEDICAL STAFF

The Coahoma County Medical Society and the Clarksdale Hospital Medical Staff was called to order in the dining room of the Alcazar Hotel by the president immediately after lunch May 11. The minutes were approved as read.

A discussion of the colored hospital of the Sons and Daughters of the Knights of Tabor was then entered into and all phases discussed fully. The following committee was appointed to represent the Society: T. G. Hughes, I. P. Carr and E. LeRoy Wilkins.

A motion picture entitled "Human Sterility" was then shown.

There being no further business the society adjourned.

Clarksdale, N. C. Knight,
May 13, 1938. Secretary

COAST COUNTIES MEDICAL SOCIETY

At the regular meeting of the Coast Counties Medical Society, Dr. G. Wallace, Biloxi, presented before the Society an excellent and interesting paper on "Malignancy of the Colon." Following this paper he presented a case. He stressed the importance of early diagnosis, and believes that the two-stage operation is the choice surgical procedure.

Dr. Wallace's paper was discussed by a number of the members.

The Coast Counties Medical Society is beginning to lay plans for the state medical meeting in Gulfport next year, and the society proposes to make the 1939 meeting one of the best.

Dr. C. A. McWilliams, Gulfport, has been appointed general chairman and will soon announce his committees.

Biloxi, D. L. Hollis,
May 6, 1938. Secretary

ISSAQUENA SHARKEY WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Vicksburg, Tuesday, May 10, beginning with a supper served at 7 p. m. Twenty-five members and three guests were present. Dr. B. B. Martin, Jr., president, presided.

Papers and Discussions—Malignant Disease.—Dr. S. W. Johnston, Vicksburg, Chairman.

1. Carcinoma of the Cervix Uteri.—Dr. J. A. K. Birchett, Jr., Vicksburg.
2. Malignancies of the Ovary.—Dr. I. C. Knox.
3. Carcinoma of the Large Bowel Exclusive of the Rectum.—Dr. B. B. Martin, Jr.

The papers were discussed together by Drs. G. M. Street, W. H. Parsons, P. S. Herring, N. B. Lewis, L. J. Clark, L. S. Lippincott, W. P. Robert and S. W. Johnston.

Dr. W. H. Scudder, Issaquena County, and J. A. K. Birchett, Jr., Warren County, made reports of the meeting of the Mississippi State Medical Association in Jackson.

Dr. W. H. Scudder, Mayersville, was elected vice-president of the Society.

Reports of the out-patient clinic operated under the direction of the Society at the Mississippi State Charity Hospital, for the month of April showed total patient visits 987 with a daily average of 33. Classification by services showed medical, 159; surgical, 127; obstetrical, 48; gynecological, 65; eye, ear, nose and throat, 69; orthopedic 20; pediatrics 17; genitourinary, 325. There were 301 veneral patient visits. Patients came from fourteen counties of the state and from three other states.

Dr. F. M. Smith, chairman, made a report concerning the radio programs being sponsored by this Society weekly.

The next meeting will be held at the Mississippi State Charity Hospital, Vicksburg, June 14. The subject will be mental disorders and phychology in medicine and the committee consists of Drs. L. J. Clark, chairman; M. J. Few, D. A. Pettit, and H. B. Wilson.

DR. MALCOLM A. McEACHERN

Died at North Carrollton, Jan. 11, 1938, Dr. Malcolm A. McEachern, a native of Carroll County and a practicing physician since 1900, aged 66. He leaves a wife and 2 children. Died of pneumonia after illness of two years.

Carrollton, C. H. Holman,
April 28, 1938.

DESOTO COUNTY

The recent meeting of the Mississippi State Medical Association in Jackson was a complete success. The program was good as was the attendance and the social features were very pleasing indeed. The pageant, "Mississippi Glory," given in the rotunda of the new capitol instead of on Dr. Shands' lawn due to threatening weather, was distinctively lovely.

The receptions at the homes of Drs. Harvey F. Garrison and Harley R. Shands were entrancing as was the president's ball and floor show. Dr. L. W. Long and Dr. John S. McIntosh, the latter of the old A. M. C. and national guard remembrance, and others did everything in their power to make the occasion interesting and pleasant.

Outgoing president W. L. Little and president Joe E. Green have wrought well. The election of Dr. J. P. Wall of Jackson as president-elect was a happy one. President Green and Speaker of the House, Dr. J. Rice Williams, are past masters of the F. & A. M. of this state. Many physicians are members of this ancient and accepted order. So you can follow them as your guides and be unafraid. Our next meeting will be in Gulfport May 9, 10, 11 1939.

Dr. C. W. Emerson and the editor were present from this county.

Dr. and Mrs. H. M. Wadsworth are receiving congratulations upon the birth of a little son, their first born, who arrived recently at the Baptist Hospital, Memphis. He has been named Henry Manley, Jr.

The county health officers' morbidity report issued by the capable State Board of Health for 1937 is interesting. DeSoto County and other counties in the northwestern section show up well as to the number of varying disease; the number of cases of dysenteries were larger than I had supposed. One of the most populous counties has 5,717 cases of the two social diseases; the results from these diseases are frightful to behold. Every effort that is being made to combat these communicable and widespread diseases should be encouraged.

A physician who has treated the greatest of the operatic warblers asserts that as little as one alcoholic drink per day will endanger the finest qualities of the singing voice.

Medical Gains Lauded.—Achievements of the American medical profession in the last 50 years should give pause to those who "attempt to take control of the practice of medicine from it," Dr. Irvin Abell, president-elect of the American Medical Association, told the Medical Association of Georgia.

"The death rate has been reduced 50 per cent and the age at death has been increased 100 per cent," he said. "Today under our system of medical care, we have the lowest rates for death, for infant mortality, and for most of the infectious disease that prevail anywhere in the world."

Aiming at proposals for socialization of medicine, Dr. Abell said:

"The doctor's opposition to Government control of medicine is not entirely self-centered. I think our past records of service will show that we are vitally concerned with the greatest good for the greatest number of people."

Tribute to Dr. Weissinger.—At the Easter service held Sunday morning at the Methodist church a beautiful tribute was paid the memory of Dr. Alex Weissinger, this day being the second anniversary of his death. On behalf of Circle One of the Methodist Missionary Society, Mr. F. C. Holmes, in well chosen words and with deep feeling, paid homage to the beloved physician who had served the community for more than a quarter of a century. The lilies which the women of the circle had placed upon the altar were dedicated to the memory of Dr. Weissinger on this, the second anniversary of his burial, and later placed upon his grave in the cemetery.

Mrs. Cora S. Weissinger, relict of the Dr. A. J. Weissinger, had for her guest recently her daughter, Mrs. Kountz, wife of Dr. W. B. Kountz of St. Louis, Mo., and her children.

Dr. Henry B. Gotten of Memphis, in a treatise read before the State Medical Association of Tennessee at Knoxville in April, 1938, on the treatment of pneumonia stated that this disease has been termed "the Captain of the Men of Death," which has become more amenable to treatment under the plan which he outlines. Dr. Gotten said that an anti-pneumococcic serum taken from horses "cuts the lobar pneumonia rate in half." Because of the expense of the serum and lack of general usage, many physicians have avoided the treatment. Cost to the patient is between $60.00 and $125.00. A rabbit serum is being developed and will be available soon at a much lower cost.

"Since the value of the pneumococci serum has been definitely determined, there is a responsibility on the part of the community and physicians to make this serum available to the greatest number of people."

He explained that the serum is injected into the veins after the pneumonia has been classified as to type.

"Rapid typingand experience in treatment are vitally necessary," Dr. Gotten asserted.

An epoch in the lives of Dr. and Mrs. Henry B. Gotten occurred recently when their first child, a son, was born to them at the Baptist Hospital, Memphis, Tenn. He is named for his father. All three are doing well and receiving congratulations from family and friends.

Dr. James W. Lipscomb, Columbus, president of the State Board of Health and a general practitioner of note, has been busy of late with affairs of the church. Dr. Lipscomb is president of the Society for the Preservation of Southern Methodism; we are thoroughly with him and pray earnestly for a continuance of a Methodist Episcopal Church South and all that for which it stood. Dr. Lipscomb is to be highly commended for his faith and works.

For he visionized the admonition given to Timothy by Saint Paul, "Study to shew thyself approved unto God, a workman that needeth not to be ashamed, rightly dividing the Word of Truth."—II Timothy, 2-15.

Rt. 4, Memphis, Tenn. L. L. Minor,
May 6, 1938. County Editor.

HUMPHREYS COUNTY

Those from Humphreys County who attended the meeting of the State Medical Association at Jackson last month were: Dr. J. W. Barkley and Dr. Geo. Barnes, Belzoni, and Dr. and Mrs. T. J. Barkley, Isola. It was unfortunate that more of us did not attend.

A tuberculosis clinic was conducted at our health office April 25, 26 and 27 by Dr. D. L. Anderson. All cases examined were discussed with local physicians by Dr. Anderson on May 5. The discussion, lasting about two hours, was quite interesting. It is regretted that only two physicians other than the local health officer met with him, especially in a county where clinical conferences are so much needed to bring physicians in contact with certain and special phases of internal medicine. We should greatly appreciate Dr. Anderson's time and detailed information. He is capable, untiring, and unassuming.

We were glad to see Spencer Barnes home on Mother's Day. He completes this spring his four years at "Ole Miss." One can safely predict in him material of a successful physician.

Dr. W. S. Taylor, Isola, following two weeks rest at Memphis, evidences a regaining of his old stamina, which most of us lose before we get to be his age in practice, although he cannot be judged to be as old as indicated by mental alertness and a small waist measure. Dr. Taylor has never failed or faltered in supporting our Delta Medical Society.

Mrs. Lou Crider, Bradford, Tenn., was visited on her birthday by Mrs. J. W. Jackson.

Belzoni, J. W. Jackson,
May 11, 1938 County Editor

LEFLORE COUNTY

Dr. R. E. Semmes, Memphis, spent Saturday night, April 2, in Greenwood in consultation at our local hospital.

At the regular staff meeting of the Greenwood Leflore hospital Thursday night, April 7, a chicken supper, strawberry short cake, etc., were served to 17 local doctors, and to Drs. Harper and Hightower, of Itta Bena. Dr. F. M. Sandifer reported a death in hospital from cancer of liver, and Dr. R B. Yates reported a death from spinal anesthesia. Illustrated films on edema from heart diseases were shown.

Dr. Ralph Sneed of Pontotoc County, a graduate of the University of Tennessee, was a visitor to his brother, Dr. W. W. Sneed, dentist, April 12.

Sixteen of our local doctors attended the meeting of the Delta Medical Society at Rosedale. Dr. S. L. Brister, Jr., read a paper on "Allergy in Children.

Dr. C. N. D. Campbell, Cruger, was a visitor to Greenwood April 13. Dr. and Mrs. T. G. Hughes, Clarksdale, spent Easter Sunday with relatives in Greenwood. Dr. Gwin Mounger, Yazoo City, spent Easter with his mother. Dr. G. Y. Gillespie, Jr., spent the day with his father at Duck Hill.

Dr. and Mrs. J. S. McLester, Birmingham, stopped over to visit at the home of Mr. and Mrs. C. G. Nichols at Lakeview on their way to the meeting of the Mississippi State Medical Association. Those of our local doctors attending were: Drs. Geo. Baskerville, S. L. Brister, Jr., J. C. Adams, W. E. Denman, J F. Lucas, R. E. Wilson, R. B. Yates, F. M. Sandifer, J C. Pegues, L. B. Otken, J. A. Crawford.

Dr. J. J. Kazar, Tchula, stopped over in Greenwood on his way to attend the Rotary Convention in Memphis, Monday, April 25.

Dr. C. F. Freeland, Glendora, brought a patient to our local hospital April 28.

Dr. D. H. Thomas, French Camp, was a visitor to Greenwood April 29.

Dr. and Mrs. Tate Carl, Memphis, visited in Greenwood April 30.

Greenwood, W. B Dickins.
May 2, 1938. County Editor.

WASHINGTON COUNTY

For the Washington County doctors April was a month of medical meetings. The Delta Medical Society met at Rosedale Wednesday. April 13, where the scientific meeting was headed by a paper on the treatment of pneumonia by Dr. John Musser, professor of medicine at Tulane University. The evening was devoted to social events enjoyed by all. There followed the meeting of the Mississippi State Medical Association at Jackson, always an instructive and enjoyable occasion. Both meetings were well attended by Washington County physicians.

Late in April, Dr. J. B. Hirsch was called in consultation at the bedside of Mrs. Hirsch's sister, Mrs. Marx, who is seriously ill at her home in Brownsville, Tennesse.

Dr. C. T. Berry, orthopedic surgeon with the Gamble Bros. and Montgomery Clinic at Greenville, was married April 30 at Senatobia, to Miss Berry Stevens, daughter of Mayor and Mrs. Sam C. Stevens of Senatobia. The young couple will reside in Greenville at 817 Starling Street. Long life and happiness to the affable Dr. Berry and his beautiful young bride.

Dr. and Mrs. A. V. Murry, Greenville, are the proud parents of their first child, a daughter, Sally Stovall Murry, born April 23. Dr. Murry came with the Gamble Bros. and Montgomery Clinic as dermatologist and allergist in 1936. Mrs. Murry, formerly of New Orleans, has enjoyed the helpful company of her sister, Miss Shirley Stovall, also of New Orleans.

Dr. E. T. White, pathologist of Greenville, returns from the state medical meeting at Jackson, bearing a handsome silver cup, token of the excellence of his scientific exhibit of various surgical conditions of the urinary tract. Congratulations, Dr. White!

Dr. W. C. E. Spencer and family of Greenville made a vacation trip of a week during April, visiting friends and relatives in Missouri, Arkansas, and Texas. Dr. Spencer reports economic conditions seemingly better in Mississippi than in the localities visited by him.

The syphilis clinic at Greenville has moved into its new quarters, a recently erected building provided by the Washington County Board of Commissioners. The work has steadily increased in volume and effectiveness. Two nights each week are devoted to treatment and one afternoon to the taking of Wassermann tests. At present six doctors alternate by two's in the conduct of the clinic. These are Dr. C. T. Berry, Dr. J. W. Williams, Dr. A. V. Murry, Dr. E. L. Fuller, Dr. G. W. Petersen, and Dr. R. N. Crockett

Greenville, J. A. Beals,
May 3, 1938. County Editor.

WINSTON COUNTY

Mrs. Emmett Lovorn, daughter-in-law of Dr. Everett Lovorn of this county, died in a Meridian hospital May 3. She was carried by Robertson and Francis, undertakers, to McHenry Cemetery in South Mississippi for burial.

Dr. E. L. Richardson, who has been confined to his bed for several weeks with arthritis, we are glad to say, is quite a bit better and out car riding some.

Let us congratulate Dr. Joe Green on his election as president of the Mississippi State Medical Association.

We should use every means to co-operate with the new Association officers to make each year an improvement over the year before.

Drs. T. F. Kilpatrick, J. B. Watkins, T. C. Suttle, and W. W. Hickman were on the streets this week.

Louisville, M. L. Montgomery,
May 7, 1938. County Editor.

INTERPRETING MEDICAL LITERATURE

The Effect of Induced Metrazol Convulsions on Schizophrenic Patients: Reese, H. H., Vandeveer, A. H., and Wedge, A. H., J. Nervous & Mental Dis.—In a previous article the authors, of the Wisconsin Psychiatric Institution at Madison, Wisconsin, had reported their experience with 48 cases of insulin shock. This method produced such variable results that search was made for a convulsive drug which would be more uniform in its action. They found this in metrazol (cardiazol). Meduna had previously treated a total of 110 patients. It is showing very favorable results, especially in early cases. No definite history of the degree of improvement was given. The above named gentleman began the use of metrazol, February, 1937. They have reported 41 cases to date; 20 completed and 21 others still under treatment. They employ a 10 per cent aqueous solution in rubber cap vials. The ordinary technique of sterilization of everything used is employed. They require accurately adjusted syringes and needles of uniform bore. Mouth gags are made of tongue depressors covered with adhesive tape. Treatment is given twice a week. They give it in the middle of the morning, the patient going without breakfast, but being usually able to eat his noon meal. Their experience in adequate course is anywhere from 20 to 40 injections. About 70 per cent of their patients get a decided convulsion with a beginning dose of 3 c.c. If this dose continues to produce results, it is not increased, but usually it has to be stepped up and 8 c.c. is the largest amount that they have had to employ. The real crux of the treatment to secure results depends on the accuracy of the technique of the injection. It must be gotten into the circulation as rapidly as possible, otherwise, usually, no results follow. Always use the largest vein possible in the forearm. Some have tried intramuscular injections but it has not proven satisfactory. Same size syringes (5 and 10 c.c.) and needles of the same length and gauge should always be used. Deviation from this often changes results. Remember that the most important single factor is that the solution must be shot into the veins as rapidly as the plunger can be pressed down.

Clinical Phenomena Produced.—It takes one to three seconds to give an injection and symptoms are noticed almost immediately. In the pre-convulsive periods the patient usually coughs, becomes somewhat confused and just as the convulsion begins usually cries out and struggles, sometimes violently. The first thing noticed usually is the wide dilatation of the pupils; fists will be clenched tightly, the head thrown back and the mouth open to its fullest extent. The patient has a decided tonic convulsion, becoming quite cyanotic, which lasts anywhere from 30 to 60 seconds. The average tonic stage is about 12 seconds; then a violent convulsion begins and this lasts anywhere from 20 to 60 seconds. The patient sweats profusely and sometimes has a voluntary evacuation. The patient gasps when the clonic convulsions are over, with a long sigh, coughs a few times and the convulsion is over. He sometimes has a few slight twitchings, is somewhat confused for a few minutes, but the pulse soon returns to normal, the cyanosis disappears and he drops off to a calm sleep. Temperature is seldom elevated. After a short sleep, he may wake up somewhat confused and easily startled. After this, he will likely have a few hours of deep, normal sleep, waking up with probably a slight amnesia for what has happened during the morning, which soon clears up and he remembers everything up to the onset of the convulsion. The induced convulsion is always single and immediate. No case of repeated convulsion or delayed reaction has ever been reported in over 600 injections.

Complications.—It is surprising that a method of treatment, which produces such a startling effect on the nervous and cardio-vascular system, produces no complications on a physically sound patient. These men do not accept for treatment patients over 40 years of age. The only complications they have had has been one case of a dislocated lower jaw. In their experience, patients with a mild bronchitis have shown distinct improvement of symptoms during the treatment. The only untoward symptoms following an injection noted is complaint of pain in the back and muscles of the chest and this is usually in the older patients. This is probably due to the intense muscular strain during the convulsion. In two cases treatment was discontinued because of the patients' extreme discomfort. Most of this can be avoided by careful regulation of the individual dose.

The writer has not gone into the laboratory investigations in getting this extract because of lack of time and space.

In their experience they have found that stuporous catatonics do not respond well to insulin but furnish more suitable subjects for metrazol; that cases of more than a year standing practically never respond to insulin but in a great majority of cases do show considerable improvement under metrazol, even if they do not fully recover. They state that they have tried a combination of the insulin and metrazol treatment but give no definite conclusions as to the results obtained.

In this article they give five case reports: A 29 year old housewife, who was a stuporous catatonic; a 19 year old farmer; an 18 year old girl, whose mother and uncle were psychotic; a male farm worker, 21 years of age, and a domestic servant, 27 years old. All of the cases were dementia praecox; catatonic types. The first four were returned home with a complete remission; the fifth very much improved but still somewhat unstable. Many of their older cases made marked improvement but not considered permanent. They record one patient of five years' duration who had been tube fed for three years and she began to feed herself and take an interest in her surroundings after the third convulsion. In their experience, in no case which was acute and considered favorable for treatment, have they had a complete failure, all of their cases showing various degrees of improvement except in a number of older cases of long standing. They have begun the use of metrazol on a group of profoundly depressed patients. This has not been carried on long enough to make a report but their results so far are very promising.

Summary.—These collaborators treated 41 schizophrenics with metrazol convulsions and the result in the first 20 patients is as follows: discharged, full remission, 4 or 20 per cent; improved, 6 patients, 30 per cent; unimproved, 10 patients, 50 per cent (and this group were older patients of long standing). In their opinion catatonic praecox cases, in the early stuporous stage, are the most suitable subjects for this treatment. A series of cases, now being treated at our institution, have shown marked improvement and in one or two cases, the results are a little short of marvelous. We have not completed any cases up to this time, but the results obtained in the cases now under treatment, in the opinion of our entire staff, certainly justify its continued use.

May 5, 1938. B. J. Marshall.

PEDIATRICS

Harvey F. Garrison, Jackson

Common Skin Disorders in Children: Tauber, E. R. and Clarke, George E.: Arch. Pediat. 55:1 (Jan.) 1938.—The most common skin conditions in infants and children may be enumerated as the diaper rash, impetigo, intertrigo, scabies and eczema. The **diaper rash** is often seen in childrens' clinics and not infrequently among children showing definite signs of malnutrition. The lesions are found in the diaper region and are usually caused by wet or soiled diapers. This condition should be differentiated from congenital syphilis. The absence of other signs and the negative Wasserman test will suffice to make the diagnosis. Diaper rash is erythematous and if not properly treated will become papular, vesicular and pustular, and finally may ulcerate. The treatment if initiated at the onset is simple. Cleanliness with the baby's clothing and skin are the prime requisites of the treatment of this condition. The diaper should be removed as soon as soiled and the baby's skin cleansed thoroughly with soap and water, being careful to rinse the soap off. Following this, an application of some antiseptic and mildly astringent baby powder may be applied before the diaper is replaced. Sterile vaseline or olive oil is better in most cases, rather than the powder. In the vesicular and papular types, application of 2-5 per cent boric acid ointment is preferable. It is occasionally necessary to resort to x-ray treatment to kill out the infection and clear up the condition.

Impetigo contagiosa is an acute contagious condition of the skin, evidenced by the formation of erythematous patches followed by vesicles, pustules and crusts, appearing first on the exposed surfaces of the body. If not properly and adequately cared for, the lesions may spread to other parts of the body and to other members of the family. If properly treated, the lesions heal without scarring. The lesions usually appear first as erythematous patches on the face, neck or hands, changing rapidly into vesicular, pustular and superficial crust formation within 48 hours. The crusts have a yellowish and gummy appearance normally, but when mixed with blood become a darker brown. They appear to be fastened to the skin, and when removed, leave a weeping, eroded, superficial surface. Cleanliness is the essential factor in the treatment of impetigo. Every individual lesion should be removed with soap and water and all the crusts removed. After this is done, each eroded surface should be coated with 2-5 per cent ammoniated mercury ointment. Care should be exercised that infectious material from the lesions does not contaminate areas of normal skin, which would cause infection of new areas. Special care should be used in using adhesive tape, in attempting to hold dressings in place, because of the danger of infection at the point of contact of the adhesive with the skin. Children suffering with impetigo should be separated from other children.

Intertrigo, or chafing, may be described as a condition of hyperemia of those areas of the skin which lie in apposition and between which perspiration is excessive or is retained. As the process continues, the erythema increases to the extent that maceration of the epidermis with actual production of superficial ulcerations may be produced, resulting in an inflammatory dermatitis. Treatment of this rather painful condition consists of gentle washing with mild soap and water and careful drying with a soft linen towel or soft tissue after which there is applied a soothing dusting powder of the finest texture. This may be made up of zinc stearate, bismuth, starch, chalk, zinc oxide or lycopodium. If an antipruritic effect is needed, a small amount of camphor, phenol or menthol is added. Soothing lotions such as zinc oxide in tragacanth, may also be used with addition of an antipruritic agent. In the early stages of the condition, cold creams with separation of the parts with soft gauze may bring relief.

Scabies or itch is an infectious disease caused by the burrowing of the impregnated female Acaris scabiei in the skin. The symptoms and appearance of this condition, are entirely too well known to require lengthy discussion. The itching and main surface of infection is usually found initially on the dorsal surface of the interdigital webs, flexor surfaces of the wrists and forearms, the axillae, genitalia and the lower abdomen. If allowed to progress without treatment, the disease continues to become worse, and may involve the entire body. Treatment in the early stages consists mainly of the external application of sulphur in the form of an ointment. The infant should be bathed in warm, soapy water, and 5 per cent surphur ointment applied over the whole body except the face and scalp. This should be repeated every day for at least three to five days, without changing the patient's clothing or linen. After the third or fourth application, a hot soapy bath may be given, and the child dressed in clothes which have been previously boiled. Bed linens should also be changed at this time. Occasionally secondary dermatitis develops from sulphur ointment being applied, and this may be treated by some bland ointment such as boric ointment. If the scabies is not entirely cleared with this application, there is usually some fault in the technique of the treatment, and it should be repeated.

Eczema. This may be either an acute or a chronic inflammatory condition, characterized by practically all of the various types of skin manifestations, such as redness, papules, pustules, scales, crusts, etc. Associated with these manifestations may be infiltration and thickening with more or less burning and itching. Eczema may manifest itself in four distinct forms which may be alone or found concurrently on the patient. Erythematous eczema is evidenced by pinkish or reddish patches of dry, sometimes edematous areas with or without burning or itching.

Papular eczema is composed usually of more or less discrete patches of pinpoint or pinhead sized papules of a pinkish to violaceous hue. The areas of predilection are the trunk and limbs.

Vesicular eczema, which is probably the most typical form, may start as a few discrete erythematous patches, followed by disseminated groups of rounded, thin walled vesicles. Coalescence of these vesicles may occur. Crusting and oozing areas of denuded skin follow. After chronicity has been established in this type, the skin becomes thicker and infiltrated with a dark, red color. The actual or specific cause of eczema is unknown. Several factors, however, enter into its etiology. Thin, dry skins are more susceptible. Many constitutional conditions, in themselves non-symptomatic, are often essential etiologic factors. External causes are numerous and varied in types. The etiologic factors in each individual case must be studied carefully to aid in the treatment of that case. Eczema must be differentiated from scabies, sycosis, simple erythema, ringworm, pityriasis rosea, lichen planus, herpes, psoriasis, erysipelas, syphilis, urticaria and impetigo. Treatment should consist of both external and internal regimes. The internal regime, should necessarily include a dietary regime, consisting of simple nourishing and easily digestible foods. Fats and starches are often eliminated, or at best, limited in amounts.

The gastro-intestinal tract should be kept open by mild laxatives and large amounts of water. If the patient's condition is below normal physically it should be returned to a condition as near above normalcy as possible. It will be noted that some drugs often aggravate an eczematous condition. As a general rule, water, and particularly soapy water is detrimental in eczema. Scales and crusts should be removed by ointments or non-iritating oils. The treatment should be initiated by the application of soothing lotions or ointments. Burrow's solution, calamine lotion, boric or zinc oxide ointment should be used first. As involution or chronicity develop, the more stimulating or keratolytic agents such as Lassar's paste with salicylic acid or tar ointment may be used. When itching is severe, it may be controlled by the use of menthol or phenol in either the lotion or ointment. Many cases of generalized eczema and even regional eczema may be greatly relieved by using colloid baths. These are prepared by using one cup of bran or uncooked oatmeal with one tablespoonful of starch placed in a cloth sack and agitated in warm bath water before and during bathing.

In all cases of infantile eczema it must always be borne in mind that the causative factors consist generally of physical derangements, such as low resistance, gastro-intestinal upsets and dietary imbalance, as well as external exciting factors.

* * * *

Comment: It is understood that no one article on the above subjects could thoroughly cover all of the subjects incorporated, unless it would be entirely too long for this purpose, however, just at this season of the year, I felt that an article of this kind would be interesting to the general practitioners of Mississippi.
May 5, 1938.

ORTHOPEDICS

Thomas H. Blake, Jackson

Osteosynthesis in the Presence of Metals—Venable, Charles S., San Antonio, Texas, So. Med. J. (May) 1938.—The author of this article carried out a very elaborate set of experiments using many types of metal in experimental animals. These metals were also tested by being placed in salt solution and noting their corrosing ability. Also a micro-ammeter was used to see the electrical current set up by placing these materials in a solution. At the end of the experimental time in each metal used, the plates were re-examined and of all preparations studied, i was found that vitallium was by far the less active. X-ray study of screws placed in experimental animals showed little or no absorption about the screw at the end of several months and on removing the screw there was no corrosion noted.

Comment: Dr. Venable has indeed made quite a step forward in presenting this very valuable information about this type of metal to use in the body. It is far superior to the material now in common use. It is extremely hard but I know of one case in which a screw broke. This material should soon replace the older plates, screws and nails that are in common use.
May 11, 1938.

INTERNAL MEDICINE

Lawrance J. Clark, Vicksburg.

There is an extremely interesting subject in the Archives of Internal Medicine for April, 1938, by Green, Plotz and Localio of New York, on "Liver and the Biliary Tract." They had noted that there had been no particular advancement in the study of liver disease by American authors since 1934. They referred to Eppinger's textbook on "Hepatic Disease" as possibly an outstanding piece of work. They have reviewed pigment metabolism in relation to jaundice, which includes bilirubin, urobilin, and urobilinogen, and a few other pigments. This was taken up in detail and possibly has a great deal of importance. They also reviewed the phosphatase in the differential diagnosis of jaundice. The question of portal hypertension is extremely interesting. A few points of value are interesting because they aid in the early recognition of such conditions. Congestive splenomegaly is well described. A study of the blood flow from the portal veins into the collateral circulation is well reviewed, together with a diagram that is very timely, as well as the question of venous bruit, the esophageal varices, and a few words about the surgical treatment of ascites hematemesis and a comment on the accessory factors in the production of ascites.

In the April Annals of Internal Medicine, Elmer L. DeGowin of Iowa City, reports the grave sequellae of blood transfusions. In a clinical study of thirteen cases occuring in 3,500 blood transfusions, seven deaths of the 13 sequellae were attributed dicectly to blood transfusions. Five patients died of renal insufficiency and two of pulmonary edema. A word of caution was mentioned as to careless typing, emphasizing sera of high titre, the necessity of cross-matching in addition to the typing, the necessity of typing immediately before the transfusion, the dangers of universal donors, unless the agglutinins of the donor have been previously titrated and found to be weak. All pathologists doing postmortem examinations in cases that have had transfusions for various illnesses from which they have died, should pay particular attention to a careful review of possible damages done by transfusion. This does not, by any means, cast any reflection upon the common practice of transfusion, but it should issue a very timely word of caution as to the routine and sometimes careless procedures that might be so frequently encountered.

May 10, 1938.

PATHOLOGY AND CLINICAL PATHOLOGY

E. T. White, Greenville

Concentration of Tubercle Bacilli by Chemical Floculation.—Hanks, Clark, Feldman: J. Lab. & Clin. Med.—The ordinary methods of concentration of tubercle bacilli have not proven to be very efficient. By chemical floculation the time is reduced and concentration is from 3 to 7 times greater than can be collected by direct centrifugation of the same specimen. It permits the preparation of very uniform and rather thick films, thus facilitating the microscopic examination. In addition, it has been shown that the floculated precipitates do not interfere with the cultivation of the tubercle bacilli when very small numbers of organisms are present.

Method of Concentration of Sputum

Reagents: (a) Digestor—4 per cent sodium hydroxide which contains 0.2 per cent potassium alum and 0.002 per cent bromthymol blue; (b) Hydrochloric acid—25 per cent conc. HCl.; (c) 1 per cent ferric chloride in distilled water.

Technic: Mix 5 c.c. sputum with an equal volume of digestor and put in water bath at 37 degrees C for 30 minutes with occasional shaking. Neutralize with HCl reagent. If floculation does not occur in less than five minutes, add 0.2 c.c. of ferric chloride reagent. Centrifuge for five minutes at top speed. Prepare uniform smears on glass slides, dry in air, heat fix, and stain by Ziehl-Neelson's method.

For Urine: To each 10 c.c. add 0.5 c.c. of 5 per cent alum solution or 0.5 c.c. of the 1 per cent ferric chloride solution; and if necessary, adjust the reaction to the neutral range. The sample should be shaken violently at the moment the reagent is added.

The Mechanism of Acidosis.—Helms, S. T.: Am. J. Clin. Path., (January) 1938.—Acidosis exists when the bicarbonate of the blood is reduced below normal.

The causes of acidosis may be (1) excessive production of acid in the body as in certain metabolic disorders as diabetes and following the administration of anaesthetics or where there is a deficiency of carbohydrates as starvation or defective absorption from the intestinal tract; (2) defective elimination of acids from the body as in renal disease with marked nitrogen retention or retention of CO_2 as in emphysema, pneumonia, and pulmonary edema; and (3) excessive ingestion of acids as hydrochloric acid, ammonium chloride or calcium chloride by mouth.

The normal alkalinity of the blood is maintained by a reserve stock of potential alkalies in the tissues, by the excretion of acid by the kidneys, and by respiration.

The methods of investigating acidosis are (1) CO_2 combining power of the plasma is probably the best test of acidosis as it is fairly accurate and not nearly so complicated as the determination of the hydrogen ion concentration.

He also discusses the importance of acidosis in certain specified conditions and the relationship of alkalization to these conditions as the common cold, fatigue, alcoholism, alkalization with salicylate medication, and in treatment of certain skin conditions, acute infection, and acidosis in diarrhea and vomiting.

Test for Infectious Mononucleosis.—John I. David,: Am. J. Clin. Path. (March) 1938.—The test is based on the agglutination of sheep erythrocytes by the heterophilic antibodies in the serum of patients with infectious mononucleosis.

Inactivate blood serum for 30 minutes at 56 degrees C. Set up 12 small tubes. Add 0.4 c.c. saline to first and 0.25 c.c. to balance of tubes. Add 0.1 c.c. serum to first tube, mix, and transfer 0.25 c.c. to second tube, mix this tube and transfer 0.25 c.c. to third tube, repeating this process to the eleventh tube where 0.25 c.c. is discarded. Then add 0.1 c.c. of 2 per cent sheep cells to each tube, shake well and keep at room temperature for two hours and read.

The finding of a titer of 1:244 in a person who did not receive an injection of horse serum in the recent past and who presents a clinical picture and hemotologic findings suggestive of infectious mononucleosis indicates with a high degree of probability the presence of infectious mononucleosis.

A titer of over 1:224 should be considered positive even if there is a history of horse serum administration unless the patient is suffering at the time of examination from serum disease.

Vaccination for Meningococcus Meningitis.—Kolmer, J. A., and Rule, A. M.: Am. J. Clin. Path. (January) 1938.—Vaccines were prepared from known virulent strains of meningococci by growing in hormone broth for five days, diluting until 1 c.c. contains 100,000,000 germs and 0.5 per cent tricresol added and incubated at 37 degrees C for 24 hours for sterilization.

Guinea pigs, rabbits, and monkeys were given from 3 to 5 subcutaneous doses at weekly intervals of this vaccine. After four weeks from completion of the vaccine all animals showed the production of varying amounts of agglutinins, and the monkey also showed the presence of complement fixing antibodies.

These animals were innoculated by intracisternal and intraspinal puncture with living virulent meningococci. The guinea pigs showed 18 per cent recovered, rabbits 46.4 per cent recovered, and monkeys 77 per cent not infected.

These results are believed to lend encouragement for the vaccination of human beings against meningococcus meningitis and especially if skin or other tests are found reliable for the detection of susceptible individuals.

EYE, EAR, NOSE and THROAT

Alston Callahan, Vicksburg

A Short Report on the Use of a New Local Aneasthetic Agent Which Gives Prolonged Analgesia.—Morrison, Wallace: Laryngoscope, P. 272 (April) 1938.—This new anesthetic, eucupin, is a synthetic alkaloid closely related to quinine. The local anesthesia action is very marked but its onset is delayed however because of this slow tissue diffusibility. The toxicity is relatively low, being about twice that of quinine. In addition to its anesthetic action it has marked bactericidal powers, being destructive to pneumococci and streptococci, staphylococci, and the diphtheria bacillus. This factor is undoubtedly an advantage when injections of the drug are made about the mouth and pharyngeal cavities as it will tend to prevent the development of local infection by bacteria carried into the tissue from the mucosal surface by the hypodermic needle.

The particular application to which eucupin has been put in rhinolaryngology is of course to secure prolonged analgesia after local tonsillectomy. It is employed in the strength of 1:1,000 or 1:500, in 1 per cent procaine solution. Thus immediate anesthesia is due to the procaine and continued anesthesia is due to the eucupin.

Thus is prevented the initial sharp pain experienced as the effect of the procaine wears away in the first hour after tonsillectomy and, therefore, the effect of the analgesia lasts for a considerable period.

Idiosyncrasy is occasionally observed, as it is to quinine and many of its derivatives. However, these manifestations are quite rare and usually transient in action.

* * * * *

Discussion: As yet we have had no opportunity to try out this new drug but we see no reason why it will not be as useful as indicated. We expect to use this drug soon and will mention our results with it later.

May 4, 1938.

RADIOLOGY AND ROENTGENOLOGY

J. A. Beals, Greenville

Roentgenology in Relation to Surgery of the Stomach, Liver, Gallbladder and Pancreas.—The April, 1938, issue of the American Journal of Surgery is completely devoted to a symposium of papers on the diagnosis and treatment of surgical diseases of the stomach and duodenum, the gallbladder, the liver and pancreas. The contributors are all from medical schools and large clinics. Their opinions should be both up-to-date and authoritative. It was interesting, therefore, to gather from such sources an estimation of the value of roentgenology in the fields under consideration.

The symposium is edited by F. A. Coller, of Ann Arbor, who, in his introductory remarks ranks the advent of the roentgen ray in gastrointestinal diagnosis as marking the change from guess work to a high degree of accuracy.

E. B. Benedict of Boston, in discussing the value of gastroscopic examination with the modern flexible instrument which is passed blindly, says the instrument should be passed only following an x-ray examination which has demonstrated a normal condition of the esophagus. He believes that gastric ulcers, most of which can be seen with the gastroscope, occur as frequently as duodenal ulcers, which usually cannot be seen. (If this statement is true, then roentgenologists are missing many gastric ulcers). He recounts cases which illustrate the value of the gastroscopic examination in elaborating and correcting the roentgen diagnosis of ulcer. It is of superior value in distinguishing between the benign or molignant character of an ulcer, and markedly superior to all other methods in making the diagnosis of gastritis.

B. R. Kirklin, roentgenologist of the Mayo Clinic, contributes a chapter on the value of roentgenology in the diagnosis of peptic ulcer.

He tabulates the diagnostic contributions of the x-ray examination as follows:-

(1) It can be relied on to disclosed any existing ulcer, regardless of clinical manifest tions which are occasionally quite inconclusive. The error due to human fallibility he placed at 2 or 3 per cent.

(2) The exclusion value of a negative examination is equally high, and this is especially useful among the many patients who recite symptoms typical of ulcer but in whom no ulcer exists.

(3) It will reveal the number, depth and surface extent of ulceration.

(4) Complications such as perforation and obstruction will be disclosed.

(5) The examination will assist materially in distinguishing ulcer from other lesions and benign from malignant lesions, although these distinctions cannot always be made with certainty. Their importance is so great that Kirklin describes in some detail the differential points revealed by the x-ray examination.

Kirklin predicates his strong claim for the very high value of the x-ray upon the assumption that the examination is made by one of experience using all the modern methods available. He ends, however, by warning that the reliance upon the x-ray examination should not be supine or exclusive, nor lead to the neglect of clinical methods and judgment.

J. S. Horsley, of Richmond, Va., writing on "Cancer of the Stomach" says, "By all odds the most important means of diagnosing cancer of the stomach is the x-ray, but this should be undertaken by a roentgenologist well trained in work with the gastro-intestinal tract, for when a stage has been reached that can be easily demonstrated roentgenologically the disease is already well on its way."

W. J. M. Scott and J. B. Mider, of Rochester, N. Y., consider "Malignancy in the Chronic Gastric Ulcer." They accord the x-ray examination a value of first rank in the differential diagnosis between benign and malignant ulcer. They consider the size of the ulcer greater than 2.5 cm. not a dependable sign of malignancy.

These authors make the somewhat surprising assertion that 10 to 20 per cent of chronic gastric ulcers without definite clinical and roentgenological criteria of malignancy prove eventually to be or to become malignant. This being true the authors believe all chronic ulcer cases, not clearly malignant from the start, should be placed on ulcer treatment for three weeks then re-examined, when, if pain and occult blood have disappeared and the size of the ulcer has diminished as shown by the x-ray examination, the case may be classed as probably benign and should be re-examined every six weeks until complete healing is demonstrated, but on the other hand, if the ulcer does not diminish within three weeks, prompt operation is advocated, for such an ulcer will prove to be malignant at the time, or if benign it belongs to a class of ulcer that is recalcitrant under medical treatment and prone to become malignant at a later date.

H. Brunn and F. Pearl, of San Francisco, considering the rare condition, multiple gastric polyposis, say that roentgenology is the most dependable single diagnostic method, except gastroscopy, but recount two cases in their experience wherein the roentgen examination was incorrect.

D. B. Pfeiffer and A. G. Martin, of Philadelphia, present a well considered discussion of the problem of the bleeding peptic ulcer, well worth the attention of surgeons and internists. They conclude that 89 per cent of cases of upper intestinal tract hemorrhage are due to peptic ulcer of the stomach or duodenum; that the mortality from medical treatment of massive hemorrhage is 5 per cent or more; that mortality rapidly rises with a second or third hemorrhage; that surgical mortality is greater, rather than less, because it is resorted to injudiciously or as a last resort when medical treatment has failed and the patient is in poor condition.

If time permits they believe no harm is done by a barium meal study provided vigorous palpation of the filled stomach, in an over zealous effort to demonstrate the ulcer, is avoided. This reviewer heartily agrees with this, and with the authors' dictum that the surgeon's job is to stop the bleeding, and possibly save a life, and not at the time to necessarily cure an ulcer (or pre-operatively localize it by roentgenology.)

W. Walters, of the Mayo Clinic, writing on the subject of chronic gastric ulcer, says, "Of first importance, when a patient presents himself with a history suggesting benign ulceration of the stomach or duodenum, is that roentgenologic examination be made by a competent roentgenologist to determine the exact situation of the lesion."

Essentially the same clinical and roentgenological criteria for distinguishing benign from malignant ulcer is given and emphasized as was given by Scott and Mider and Kirklin.

Walters mentions the frequent difficulty encountered, both clinically and roentgenologically in localizing an ulcer to the duodenum or prepyloric region when pyloric obstruction is present, although the distinction is not so important, since operation is indicated, and if a pyloric ulcer is found it can be dealt with appropriately.

Walters states that the roentgenologist's report that an ulcer is malignant is nearly always correct; on the other hand his opinion that an ulcer is benign is not always reliable, to which Walters is kind enough to add that the roentgenologist wishes such an opinion to be considered only as a contribution to, and not a final, diagnosis.

H. K. Shawn, of Detroit, considering acute perforated ulcer, and reporting 389 cases, found that, in making the diagnosis "the most satisfactory laboratory help was in the use of the fluoroscope, with the patient in the erect position and sitting on a cart." "Finding gas beneath the diaphragm called for immediate laparotomy," but the absence of this finding did not delay operation if the history and physical signs pointed to perforation.

C. S. Rife, of Ann Arbor, contributes a chapter on "Gastrojejunocolic Fistula," a rather uncommon but a most troublesome result of jejunal or marginal ulcer following gastroenterostomy, especially when that operation has not been wisely chosen.

The roentgen diagnosis is spectacular and reliable, although considerable persistence and technical skill may be required. If the opaque meal passes directly from the stomach into the transverse colon, or the colon is filled early during the examination, the diagnosis is easily made; but in many cases the fistula is best demonstrated or can be demonstrated only by the barium enema reaching and filling the stomach or upper loops of the bowel.

C. I. Allen, of Detroit, reports eleven cases of carcinoma of the duodenum, admittedly a rare condition. The x-ray helped by demonstrating a filling defect in the duodenum in only four cases.

R. R. Graham, of Toronto, believes surgery is never indicated in duodenal ulcer except for perforation, obstruction, penetration, recurring hemorrhage and "duodenal ulcer occulta." He makes no mention of the value of the roentgen examination in the diagnosis of perforation, and says it is of little value in the diagnosis of penetration.

(This reviewer was not ill pleased to find this one time familiar autocratic dismissal of roentgenology, for while such an attitude may be reactionary at present it may serve as a tonic corrective for a modern tendency to lean heavily on the diagnostic support of the x-ray examination; too heavily perhaps to be entirely supported except by roentgenologists of exceptional experience and ability; certainly a too heavy responsibility to be borne by the mere mechanics and chemistry involved in the production of "x-ray pictures").

Graham designates as "occult" an ulcer which he has encountered seventeen times. It occurs in the descending limb of the duodenum, is of large size, sometimes causing jaundice by oedematous swelling about the papilla of Vater. "The symptom complex has defied a clinical diagnosis of duodenal ulcer" and the radiological investigation has failed to reveal the ulcer.

D. Guthrie and M. J. Brown, of Sayre, Pa., present a rather academic discussion of diverticula of the duodenum and jejunum, rightly giving the x-ray examination preponderant value in the diagnosis. The former condition is not common, the latter rare; and their significance in the production of symptoms is often doubtful.

J. L. McGehee, of Memphis, contributes a too brief discussion of the confused question of chronic obstruction and dilation of the duodenum, particularly that variety supposed to result from pressure exerted by the mesenteric root. The author rightly accords the x-ray examination the foremost place in making the preoperative diagnosis but unfortunately fails to mention how difficult it is for the roentgenologist to decide, in many cases, when a dilation goes beyond the normal variations of degree.

PUBLIC HEALTH

Felix J. Underwood, Jackson

The Present Status of the Health Examination.—Perkins, W. H: N. O. Med. & Surg. J. 90:7 (Jan.) 1938.—In 1861 Horace Dobell writing in England said, "I wish to propose that there should be instituted, as a custom, a system of periodical examination, to which all persons should submit themselves, and to which they should submit their children. If such a plan were to be faithfully and conscientiously carried out by the present and rising generation of well-educated studious medical men, I think no one can doubt, after a careful consideration of the subject, that immense benefit would be conferred upon the public."

In the seventy-five years since Dobell's serious pronouncement, the average general practitioner and most of the specialists have not taken advantage of the scientific principles underlying the periodic health examination. It is clearly stated in this paper that reference is made to a health maintenance examination and should not be confused with the ordinary examination for physical fitness.

The ultimate aim of the examination is the prevention of disease. The physician who performs the service of periodic health examinations must be convinced in his own mind that the method is based on sound scientific principles and that what limitations it possesses are not inherent in the method but are due to inadequate knowledge and techniques in the prevention of disease. When the causes of all diseases are not yet known, and even when known are not always open to attack before they have produced disease, it can hardly be expected that any one method based on this knowledge alone will be perfect or even approach perfection in its results. But this is true, curative medicine, economics, sociology, and every branch of social endeavor, and in itself cannot be sufficient reason not to try everything it has to offer.

Personal hygiene can be a science, but to become so must be scientifically approached. As long as physicians fail to appreciate that poisoning, lack of nutrition, mechanical stresses, mental states, and so forth, are behind the onset of many serious diseases, they will not and should not attempt formal periodic health examinations. But in failing to apply their knowledge they are failing in the higher aim of their profession, which is to prevent disease and maintain health.

The conduction of the health examination is no more difficult than most other procedures in medicine but must not be casual nor colored by prejudice; it lays no claim to infallibility nor miraculous results, but it does claim to be the greatest influence for the further progress of real medical service on behalf of the recipients and the practitioners of it.

May 5, 1938.

HOSPITALS

MISSISSIPPI HOSPITALS—CALENDAR OF STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASSOCIATION, Tenth Annual Session, Gulfport, May 8, 1939.

Aberdeen Hospital: Third Monday, each month, 7:00 p. m.

Anderson Infirmary: First Friday, each month, 6:30 p. m.

Biloxi Hospital: First Thursday, each month, 7:30 p. m.

Bramlett Hospital: Third Wednesday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 12:00 noon.

Field Memorial Hospital: Second Thursday, each month, 6:30 p. m.

George C. Hixon Memorial Hospital: Second Monday, each month, 7:30 p. m.

Gilmore Sanitarium: Third Thursday, each month, 8:00 p. m.

Greenwood-Leflore Hospital: First Thursday, each month 6:30 p. m.

Grenada Hospital: Second Tuesday, each month, 6:30 p. m.

Holmes County Community Hospital: Second Thursday, each month, 7:00 p. m.

Houston Hospital: Fourth Friday, each month, 7:00 p. m.

Ivy Hospital: First Monday, each month, at 7:00 p. m.

Jackson County Hospital: Second Thursday, each month, except July and August, 7:00 p.m.

Jackson Infirmary: Last Tuesday, each month, except three summer months, 7:00 p.m.

King's Daughters Hospital, Brookhaven: First Tuesday, each month, 7:00 p. m.

King's Daughters Hospital, Greenville: First Wednesday, each month, 7:30 p. m.

King's Daughters Hospital, Gulfport: Third Thursday, each month, 8:00 p. m.

King's Daughters Hospital, Yazoo City: First Monday, each month, 8:00 p. m.

McGee General Hospital: Twenty-fifth each month, 6:00 p. m.

Mayes Hospital: First Monday, each month, 2:30 p. m.

McComb City Hospital: First Tuesday, each month, 6:00 p. m.

McComb Infirmary: Second Tuesday, each month, 6:30 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

New Albany Hospital and Clinic: Second Tuesday, each month, 8:00 p. m.

Newton Hospital: Second Thursday, each month.

Northeast Mississippi Hospital: First Monday, each month, 7:00 p. m.

Oktibbeha Hospital: Last Thursday, each month, 7:30 p. m.

Oxford Hospital: Last Monday, each month.

Pontotoc Clinic: First Tuesday, each month, 7:30 p. m.

Rush's Infirmary: First Friday, each month, 7:30 p. m.

Scott County Hospital: Third Wednesday, each month.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

Tylertown Hospital: Second Tuesday, each month, 7:00 p. m.

U. S. Veteran's Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:00 p. m.

Vicksburg Sanitarium: Tenth or week of tenth, each month, 6:30 p. m.

Water Valley Hospital: Third Thursday, each month, 7:30 p. m.

Winona Infirmary: First Thursday, each month, 7:30 p. m.

HOSPITAL STAFF TRANSACTIONS

VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Wednesday, May 11, and after a supper served at 6:30 p. m., was called to order by the president, Dr. Leon S. Lippincott, with twelve members and one guest present. The program:

Reports from Records Department and Analysis of the Work of the Hospital.

Special Case Reports:

(1) Sedormid Poisoning.—Dr. G. M. Street. Discussed by Dr. L. S. Lippincott.

(2) Hypertension Review.—Dr. L. J. Clark. Discussed by Dr. H. H. Johnston.

(3) Intussusception, with Recovery.—Dr. G. C. Jarratt.

Discussed by Dr. A. Street.

Report of Vital Statistics.—Dr. F. Michael Smith, Director, Warren County Health Department (Read by Dr. Leon S. Lippincott).

Demonstration of Selected Roentgen Ray Studies—Giant Cell Sarcoma of Knee; Fracture-Dislocation of Ankle; Fracture of Hip Joint; Osteomyelitis of Inferior Maxilla; Pulmonary Tuberculosis (Four Cases); Aortitis—Plaques in Abdominal Aorta; Cardiospasm (Two Cases).

Three-Minute Reports of the Literature of the Month:

Dr. R. A. Street, Jr.—Induction of Labor.

The next meeting of the staff will be held Friday, June 10, 1938.

ABSTRACT: SEDORMID POISONING

G. M. Street, M.D.

In the Journal of the American Medical Association of March 5, 1938, Hoffman, Kahn, and Fitzgibbon of Los Angeles report three cases of thrombocytopenic purpura following the use of sedormid-Roche (allyl-isopropyl-acetyl-carbamide). In the same issue, Moody of San Francisco reports a case and, in Moody's article, he refers to three cases reported by Loewy in the "Lancet" of April 21, 1934.

The case wihch I am reporting presents a very similar picture to the cases reported in the above mentioned articles.

A woman, aged 86, came to the office April 11, 1938, complaining of black spots in the mouth and on the tongue, marked discoloration of the right eye and expectoration of blood tinged saliva. She had intense pain in the lower spine and complained of great difficulty in raising up or moving about. She also noticed that she had become very weak, had entirely lost her appetite, and felt that she had been having some fever. After questioning, it was found that for the past three or four days, she had been taking from one to three tablets of sedormid during each 24 hour period. She stated that she had used this drug at irregular intervals for a year or more without any harmful effect. However, she had been on a trip recently and had been given more doses of the drug than she had ever taken before.

Past history is not remarkable, except that she had been complaining of insomnia, nervousness, poor appetite, vertigo, and habitual constipation for the past year or more. There is no history of any surgical operations in the past and no serious illness since childhood.

Physical Examination: Temp. 99.5°F.; pulse, 86, regular; respiration 18, regular; blood pressure 140/90. Pale, but fairly well-nourished. The right eye shows a marked subconjunctival hemorrhage. The tongue is covered with large bluish, black areas, irregular in outline. They give the appearance of the tongue having been partially painted with indelible ink. These areas are exuding blood-tinged serum. There are purpuric spots on the inside of each cheek, on the pillars of the tonsils and on both the hard and soft palates. There are small hemorrhagic spots in the skin of the chest wall and larger ecchymotic areas on the thighs and abdominal wall. General physical examination otherwise reveals nothing remarkable.

Having recently read the reported cases of sedormid poisoning, the case was immediately diagnosed as such. Urine specimen is negative, except for the presence of a few fresh blood cells. Hemoglobin, 80 per cent; erythrocytes, 4,600,000; coagulation time, 5½ minutes, bleeding time, 3½ minutes; leukocytes, 14,800, small lymphocytes, 11 per cent; large lymphocytes, 5 per cent; monocytes, 1 per cent; neutrophils, 82 per cent, of which 24 per cent are band forms; eosinophils, 1 per cent. The platelet count was down to 60,000.

While this patient did not appear to be in a serious condition from the purpura, it was felt that immediate measures to correct the situation would be the safest to follow. Hence, she was admitted to the hospital and typed for transfusion. On April 12, the day after admission, she was given 500 c.c. of citrated blood. The hemorrhagic spots began gradually disappearing following the transfusion, and, on April 13, the hemoglobin was reported 80 per cent, erythrocytes 5,070,000, platelets 85,000, leukocytes 14,100, with normal differential count. On April 14, the platelet count had risen to 135,000 and no new hemorrhagic areas had appeared. General condition of the patient seemed so good that she was allowed to return home and has been under observation since. All hemorrhagic areas disappeared within a week, and the patient states that, at the present time, she feels more normal than she has during the past year.

In this case, there seems little doubt of the relationship of the purpura to the use of sedormid. The loss of blood platelets and consequent hemorrhagic conditions have been caused by the use of this drug in hypersensitive patients who may have been using the drug for some time without untoward results. The treatment by blood transfusion seems to be the quickest relief for such cases after the diagnosis has been established.

ABSTRACT: INTUSSUSCEPTION

Guy C. Jarratt, M.D.

Patient. — J. W., age 10 months, male.

Chief Complaint.—Mother states four days ago infant began vomiting and crying as if in pain. Next day (12 hours later), noted some blood in stools and nausea and vomiting had continued. Since that time there has been nausea, vomiting and straining as if at stool, with passage of small amount of bloody mucus. Since onset infant has not been able to retain anything given.

Family History.—Only child.

Birth History.—Normal cephalic.

Feeding History.—Breast, cereals, strained vegetables, orange juice.

Physical Examination.—Well-developed, but markedly dehydrated and toxic infant with sunken eyes and very dry skin. Every few minutes infant will arouse and strain at stool,, and with strain, there is a slight discharge of bloody mucus and protrusion of rectum from anus.

Head, ears, eyes and nose normal; mouth normal. Chest, well-developed; lungs normal; heart, no murmurs.

Abdomen, flat and soft; spleen and liver not palpated. Mass size of small sausage easily palpated in left lower quadrant.

External genitalia and central nervous system normal. Skin, dry.

Rectal examination shows gluteal muscles relaxed, anus relaxed, and finger easily inserted. Typical sausage-like mass palpated, and with returning finger, prune jell-like substance oozed from anus.

Course and Progress.—While this patient was in extremis, and the prognosis was very grave due to the lapse of time since the onset and the ensuing toxemia which these cases develop, and also, the marked dehydration due to the loss of fluids and inability to take fluids, we knew that the only hope was operation for correction of the intussusception. The parents were told of the gravity of the condition and they agreed to operation. Preoperatively, the child was given 200 c.c. of 5 per cent glucose in normal saline solution subcutaneously, and operation was done under ether anaesthesia.

On opening the peritoneum, we found an intussusception beginning at the ileoceal valve and extending to the rectum, and much to our surprise, this intussusception was very easily reduced, and the intestine was in excellent condition, as revealed by the pinkness of the intestine and no areas of gangrene or extreme edema. The infant stood the operation very well except at the beginning of deep anaesthesia he stopped breathing. With some artificial respiration again began breathing and from then on the operation was as usual.

Postoperatively, the patient was given 175 c.c. of 5 per cent glucose in normal saline solution intravenously through the jugular vein, and feedings of small amounts of a 1-10 dilution of condensed milk were begun and taken and retained. The first four days, postoperatively, the course was rather stormy in that the child ran a high temperature. Temperature then dropped to normal, and the child went on to an uneventful recovery.

Remarks.—I present this case, not as any diagnostic feat, for the diagnosis was very evident just from observation of the mass protruding from the rectum and the history, but it is rather unusual that one of these patients survives after having gone for four days from the time of the onset of the intussusception. The cause of the death in these cases is the marked toxemia that they have and the dehydration due to the vomiting and the inability to take fluids. Also, it is rather remarkable that the intestine was in such excellent condition at the end of the fourth day after the beginning of intussusception.

HONOR ROLL

The following have contributed to the Mississippi State Medical Association section of The Mississippi Doctor this month:

County Editors: Carrol, C. H. Holman; DeSoto, L. L. Minor; Humphreys, J. W. Jackson; Leflore, W. B. Dickins; Washington, J. A. Beals; Winston, M. L. Montgomery.—6.

Societies: Central, Lawrence W. Long; Coahoma County, N. C. Knight; Coast Counties, D. L. Hollis; Issaquena-Sharkey-Warren Counties.—4.

Interpreting Medical Literature: C. D. Mitchell and B. J. Marshall, Harvey F. Garrison, Thomas H. Blake, Laurance J. Clark, E. T. White, Alston Callahan, J. A. Beals, Felix J. Underwood.—9.

Hospitals: Clarksdale, N. C. Knight; Vicksburg Sanitarium.—2.

Others: Felix J. Underwood.—1.

Total.—20.

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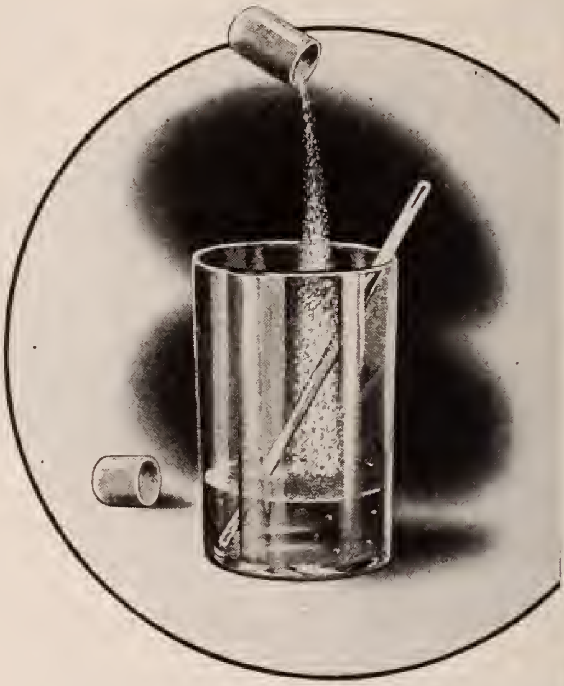

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The Mississippi Doctor

VOL. 16. BOONEVILLE, MISSISSIPPI, JULY, 1938 NO. 2.

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Are the Neuritic Symptoms of Pregnancy *due to a deficiency of vitamins B$_1$ and G?*

SUCH common neuritic symptoms of pregnancy as pains in arms and legs, muscle weakness, and (less frequent but more serious) paralysis of the extremities may result from a shortage of antineuritic vitamins, recent investigations appear to show. Although neuronitis of pregnancy has long been considered a toxemia, no toxins have ever been identified.

Clinical observations of Strauss and McDonald lead to the conclusion that the condition is a dietary deficiency disorder similar to beriberi, caused by lack of vitamin B$_1$, complicated by symptoms which may be traced to shortage of vitamin G. They report recovery in their cases receiving this therapy, including dried brewers' yeast.

Hyperemesis as Cause of Avitaminosis

Wechsler observes that all cases of polyneuritis of pregnancy recorded in the literature were preceded by long periods of severe vomiting. "It would seem," he adds, "that because of actual starvation these patients suffered from avitaminosis and consequent neuritis," a view likewise held by Hirst, Luikart, and Gustafson. Plass and Mengert observe that the practice of giving high carbohydrate feedings for hyperemesis gravidarum is still more likely to cause avitaminoses B and G.

Dried brewers' yeast, as it is far richer than any other food in vitamins B$_1$ and G, is being used with benefit both in the prevention and treatment of polyneuritic symptoms of pregnancy. Lewy found that additions of yeast to the diet reduced electric irritability of the peripheral nerves and brought clinical improvement. Vorhaus states that he and his associates, after administering large amounts of vitamin B$_1$ to 250 patients having various types of neuritis, including that of pregnancy, observed in about 90% of cases "varying degrees of improvement, i.e., from partial relief of pain to complete disappearance of all symptoms."

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Evans and Burr, Hartwell, Sure and co-workers, and Macy *et al* are among numerous authorities who find that the nursing mother also needs supplements of vitamins B$_1$ and G, from 3 to 5 times the normal requirement. Tarr and McNeile report that the physical, mental, and emotional status of 120 pregnant and lactating women receiving Mead's Brewers Yeast and other foods high in vitamin B was superior to that of a control group of 116 women.

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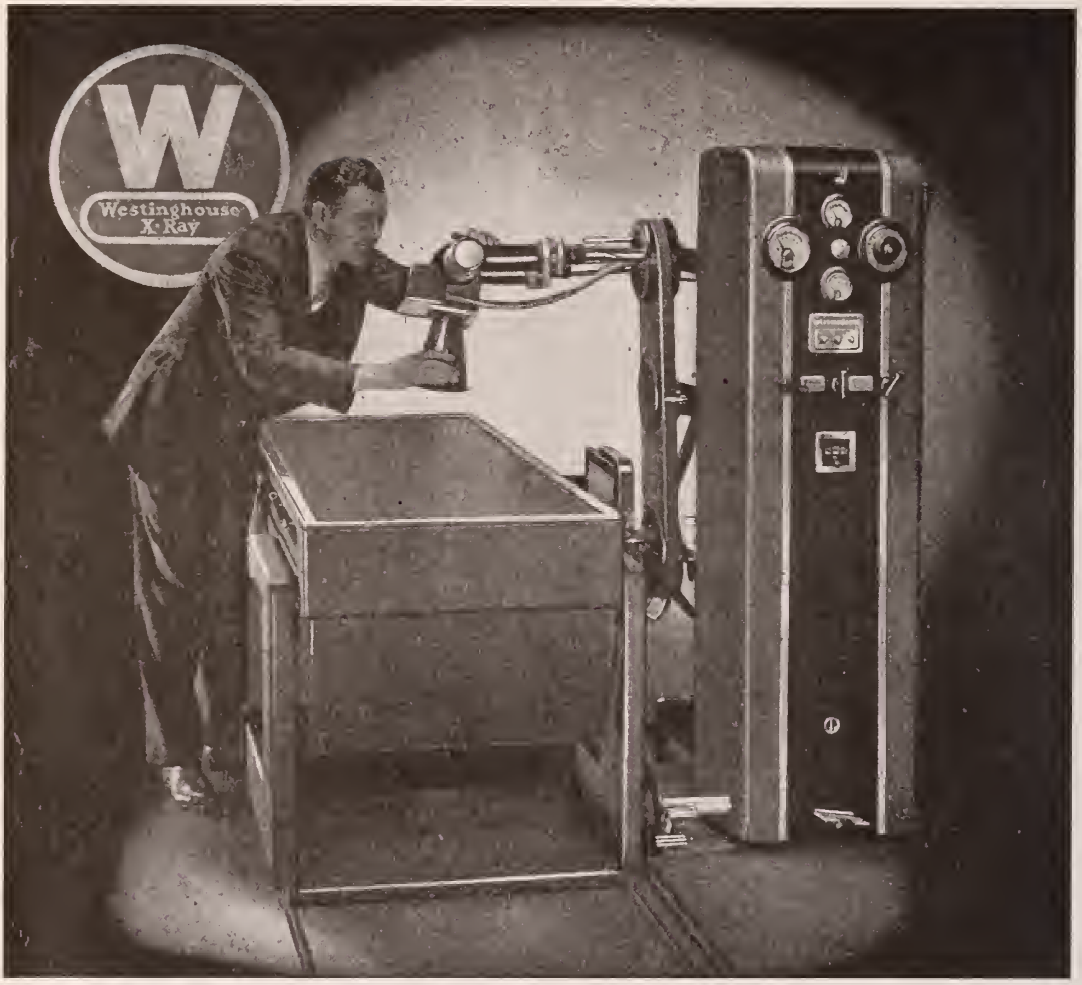

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The Acute Ear, Its Dangers and Complications*

By J. R. HUME, M.D.

NEW ORLEANS, LA.

IT IS THE VAGARIES of acute otitis media that make it both interesting and dangerous.

In the new-born it may be asymptomatic and abacterial and yet its ravages may permanently alter the aural history during the life of the individual. The milder types with infection ofttimes fail to cause alarm; convalescence is rapid with normal function the end result. Again the onset is marked by the violence of the symptoms, complications of the most serious nature occur early and ere we are aware, meningitis or blood stream infection is threatening the very life of the victim. Perhaps the onset is distinguished by the mildness of the symptoms only later without warning intercranial manifestations, too often fatal, present themselves. These are a few of the vagaries marking the course of otitis media and only by the correct understanding of the factors producing the vagaries are we able to follow the course of the disease with intelligence. Of the factors producing these variations in the course of middle ear infections, most important are the bacteriologic, anatomic and immunologic. Various organisms have been isolated from the inflammatory exudates of otitis media. It is consensus of opinion, however, that the various types of streptococci and pneumococci type III are those chiefly to be considered.

In otitis media of moderate severity, the type most frequently encountered, the non-haemolytic streptococcus is usually the invading organism found. In those of rapid and violent onset, the haemolytic streptococcus prevails. When the pneumococcus type III invades the ear, the course is characterized by the mildness of the symptoms, so long as the infection is confined to the tympanum and mastoid region.

The anatomic factor is determined largely by the age of the patient; it is obvious that the infant ear presents a different anatomic picture from that of the older child and adult. The short patent Eustachian tube existent, doubtless accounts for the frequency of the disease during this period. This anatomic conformation easily permits the aspiration of the amniotic fluid during delivery which ofttimes enters the middle ear. During the first weeks of life, vomiting material may enter in the same manner; either of these occurrences may fail to produce symptoms, since the aspirated fluids are usually free of bacteria. Such a latent otitis, however, in many instances, inhibit the pneumatization of the mastoid cavity and likewise a tendency to recurrent attacks of an inflammatory nature, is established by virtue of such anatomic variations from the normal.

Suppurative otitis media may also occur in early infancy, probably caused most frequently by aspirated vomitus entering the tympanic cavity during the course of or following an acute respiratory infection. The symptoms of most value for diagnostic purposes are those of restlessness and nutritional disturbances. Otoscopy at this age is a difficult procedure, considerable experience being necessary to inspect properly the tympanic structures; even normally the latter present poorly defined land marks.

During these infantile attacks of otitis of an inflammatory nature, the membrane is only slightly reddened, it rarely presents the diffuse redness of the adult tympanum with an equally virulent infection. There is little tendency to spontaneous rupture and it occurs late if at all. Extreme restlessness is given immediate relief by a tympanotomy but the fever may be expected to persist a few days following the procedure. The temperature from this cause during the early weeks of life is seldom high, 101°F is probably a maximum in uncomplicated cases. At this age it is rarely fatal and less likely to present complications than during later periods of childhood, however, the above description, as any description of otitis media at any age, is inadequate.

---

*Read before the Mid-South Post-Graduate Medical Assembly, February 18, 1938, Memphis, Tenn.

One must be alert for variations from his own concept of the course and terminations of infections of the tympanic cavity and be prepared to analyze such variations without delay.

The infantile type best typifies the infection that gains access to the tympanic cavity by way of the lumen of the Eustachian tube. It may be noted, however, at any age. The milder types of infection result from superficial invasion of the sub-mucosa and the lymph channels, the more severe types, by way of the inter-cellular spaces and venus capillaries of the deeper layers of the mucosa.

Rather than present a conception of otitis media as an entity, I trust it may be more understandable to describe about four pictures of the disease noted in daily practice and outline their probable course and dangers.

First, we see the case following or occurring during an attack of some upper respiratory infection; such a patient will complain of a certain fullness in the ear, pain may or may not be present, temperature, if present, will be of a low grade, inspection of the tympanic membrane will show a localized redness most often in the region of the land marks, the malleus and its articulation with the incus. The route of infection in this type is most often by way of the lumen of the tube. It is noted most frequently in infants and young children and in the aged. This type requires litttle treatment, is of short duration, recovery resulting with normal function. If it were not for the frequent confusion of this type with that produced by the pneumococcus type III, the above description would hardly be necessary. This latter organism invades the ear frequently with the mildest of symptoms at the onset, unfortunately in many instances called to the attention of a medical attendant. If inspection of the tympanic membrane the symptoms are so mild that they are not is made, the picture is much the same as that in the mild type above described, pain and temperature being negligible symptoms. Increasing loss of hearing with tinnitus are almost invariably present in the pneumococci type III otitis. Every case, however mild, with head noises and great loss of hearing should be kept under observation for weeks and even months. Without pain or other symptoms an intercranial or blood stream complication may develop without warning. A failure to recognize this most treacherous type of infection becomes danger No. 1, its unannounced complications may be any of the structures contiguous to the tympanic cavity.

The type of otitis media of whose course we are most familiar, owing to the greater frequency of occurrence, is that commonly produced by the non-haemolytic strep. which invades the tympanic cavity by way of the sub-mucosal lymphatic channels and involves the superficial structures of the mucosa. It most frequently follows acute colds and the various upper respiratory intervals and is more prone to occur at night. In the course of a few hours or a few days, the pain becomes more constant, the tympanic membrane becomes reddened and bulging, the land marks no longer observed. At this time perforation of the membrane occurs unless tympanotomy is previously performed, usually following this, the temperature recedes within a few hours and the pain subsides. The discharge, at first sero-sanguineous, within a few hours becomes mucoid and later muco-purulent; this discharge may persist from a few days to three or four weeks. If not attended by complications the discharge ceases and the ear returns to normal with slight or no impairment in function.

While the treatment of this condition may be simple, being chiefly the care of the naso-pharynx plus tympanic drainage and careful cleansing of the external canal, we must constantly be on the alert for any symptoms of oncoming complications—pain persisting in an ear, over the mastoid, the retro-bulbar region or may be diffuse over the side of the head of the diseased ear. It is well to remember that pain is a negative quantity in the suppurative otitis that is progressing satisfactorily. The temperature if present should be of low grade after free drainage is established, any gradual or sudden elevation should at once be analyzed. Not only should we consider the contiguous structures to the tympanic cavity as probably becoming involved but also recall that a pneumonia or kidney complication could well be the cause of the temperature. An early roentgenogram of the mastoid and petrous regions will not only prove immediately valuable but may later prove invaluable. Likewise a total blood picture shoud be made. Any sudden changes in this picture, whether it be marked increase in the total white cell count or a gradual falling of the haemoglobin index, denotes dangers. Any deviation from the picture of the normal course, should be viewed as a danger sign and no delay permitted in their careful study.

Less frequent than the above type and more to be dreaded, is that produced by the invasion of the haemolytic strep. This infection gains access to the middle ear by way of the inter-cellular spaces and venus capillaries of the deeper layers of the mucosa. While it may follow the usual upper-respiratory infections, it more often is a complication of acute infectious fevers as scarlet fever, measles, etc. The onset is marked by chilly sensations followed immediately by high fever and intense pain localized in the ear. The cavity is soon filled with a bloody exudate, the tympanic membrane is bulging and no land marks are noted. If within a few hours tympanotomy is not performed the membrane ruptures and the bloody exudate discharges into the external canal. In the more violent types, the temperature and pain are but slightly reduced by tympanic drainage. It is hardly necessary to enumerate the danger signs since all symptoms are of a serious nature. Roentgenographic visualization, blood pictures and careful general physical examination should be oft repeated.

In studying the complications of acute otitis media, there are several factors to be considered. The structure of the bone contiguous to the tympanic cavity; the type and virulence of the organism and the general resistance of the patient. Each has a bearing on the type of complication to be anticipated. Of these complications in order of their frequency of occurrence, would be mastoiditis, thrombophlebitis, blood stream infections, intercranial invasion and petrositus.

The mastoid of otitis media of the moderate and severe types; all of these cases however, do not demand surgical intervention.

The temperature curve and blood picture is of relatively little value in determining the involvement of the mastoid cells. If during the course of an otitis, the discharge remains abundant after the second or third week, the posterior wall of the external canal is found sagging with tenderness by deep pressure over the mastoid antrum or tip; with the roentgenogram showing areas of coalescence or necrosis, the diagnosis of mastoiditis may be safely made. Every roentgenogram made early in the course of the otitis will prove of value as a control later.

If at any time during the course of acute otitis media a sudden high temperature is noted which is probably preceded by a chill a blood picture and blood culture should be made at once. In the uncomplicated otitis media, the total white count rarely exceeds 15,000 a count taken at this time may show from 25,000 to 30,000 with a marked increase of the new cells. Such a picture would be suggestive of thrombophlebitis. The blood culture taken during the first exacerbation or temperature is usually negative; if positive, a blood stream infection already exists. Early surgical intervention is demanded as procrastination often results in a fatal outcome.

Intercranial invasion during the course of acute involvement more often presents itself in the form of meningitis. The temperature here is high with little remission, the headache severe and usually general in character, rigidity in the neck muscles often noted early, blood picture not markedly altered from that of the otitis. Early symptoms of meningitis suggests an immediate lumbar puncture; the fluid under pressure cloudy and showing an increased leucocyte count makes the diagnosis positive.

Petrositus is a complication noted late in the course of the disease, while usually preceded by a mastoiditis and not infrequently one performed. A low grade septic temperature, in which a simple mastoidectomy has been retro-bulbar and temporal pain on the same side occuring during the course of otitis must not fail to direct our attention to the petrous pyramid. The symptoms may be accompanied by a paralysis of the external oblique muscle of the eye. If during the early period of the aural involvement, symptoms are probably produced by intense venus congestion, if late, a probable invasion of the petrous cells.

Conclusions: (1) otitis media is a disease of many vagaries, the factors producing these vagaries must be understood for an intelligent conception of the disease. (2) Factors producing these variations in course of the symptoms are bacteriologic, anatomic and immunologic. (3) The routes of invasion are by way of (a) the lumen of the eustachian tube, (b) superficial invasion of the sub-mucosa and the lymph channels (c) by way of the inter-cellular spaces and venus capillaries of the deeper layers of the mucosa. (3) Complications should be anticipated and a diagnosis established at the earliest possible moment.

Hydronephrosis, An Obscure Cause of Undiagnosed Intra-Abdominal Pain*

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To the alert physician unexplained unilateral costovertebral backache provokes a search for hydronephrosis. As we all know, however, the symptomatology is not always so clear-cut. The condition often is so hidden that good physicians fail to look for it and the patient remains in the medical world a neurotic or wanders into the field of quackery where he is treated for a non-existent dislocated vertebra.

It is well, therefore, to direct attention to this important pathologic state. A desire to assist you in making the diagnosis in individuals who present themselves with obscure abdominal pain has prompted the discussion which is to follow.

DEFINITION

Renal changes of pelvic dilatation and parenchymal atrophy due to urinary obstruction are designated as **hydronephrosis.** Normally there may be a stasis of as much as seven cubic centimeters of urine within the kidney pelvis. In the hydronephrotic case, therefore, stasis of urine is in excess of seven cubic centimeters. The condition, further, presupposes continued secretion of urine in spite of the obstruction.

HISTORY

The term hydronephrosis was coined by Rayer[1] whose "Traité des Maladies des Reins" appeared in 1841. Nephrohydrosis and nephrectasis were suggested as synonyms by Aschoff and Morris[2], respectively. However, it was not until 1857 that probably the earliest account of a specific factor productive of the condition appeared in print. In that year Boogard[3] described kinking of the ureter around an anomalous vessel. Sixty-three years later, Eisendrath[4] published a case in which a main artery was recorded as initiating pelvic obstruction.

To Fenger[5], of Chicago, must go considerable credit for stimulating interest and resultant activity in renal surgery in the United States as well as on the continent. His monograph appeared in 1894, being one of the first documents pertaining to mechanics and the requisite surgical management of valve-formation and stricture of the ureter. The contributions of Von Lichtenburg, Quinby[6], and others have served to revive interest. Trendelenberg[7] must be remembered for his early attempt at plastic surgery (1886), and Kuster[8] for the primary successful operation (1891) of reimplanting the ureter in the most dependent portion of the pelvis in order to establish drainage.

ETIOLOGY

Regardless of the causes of obstruction to the urinary outflow, which we shall consider presently there **must not be complete occlusion of one or both ureters** if the condition of hydronephrosis is to be produced. **Complete continued blockage of a ureter results in the death of the kidney of the affected side** without hydronephrosis formation, and it is obvious that **continued complete occlusion of both ureters** results in a **state of anuria with impending expiration.**

In this connection it is well to mention that in all obstructions of the lower tract the effects of back pressure will be felt in the upper tract sooner or later, but the changes brought about may be very unequal on the two sides. Changes in the lower tract are fundamentally vesical and those in the upper tract are ureterorenal. And, as every urologist knows, some of these changes which develop as the result of obstruction, notably vesical diverticula and angular hydroureters, become and are obstructive factors requiring attention after removal of the primary cause of obstruction.

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*Read before the Pike County Medical Society, February 8, 1938.

In passing we might state that an **adynamic stasis of urine** may occur in either the lower or the upper urinary tract as a result **of disturbed innervation.** Ofttimes considerable urological diagnostic ability is necessary for differentiation of this type of urinary block from those caused by mechanical obstruction. The spinal cord bladder is typical of the neurogenic group. Under the same category are listed paralytic and atonic bladders and ureters.

The obstructive lesions may be congenital or acquired, intermittent or continuous, complete or partial. If the obstruction is at the vesical neck or the urethra the hydronephrosis is usually bilateral and develops slowly due to the buffer effect of the intervening bladder.

For the sake of brevity we list below some of the obstructive factors which may produce hydronephrosis:

1. Renal: Calculi, tumors, or nephroptosis with kinking at or near the ureteropelvic junction, and aberrant vessels or fibrous bands exerting pressure upon the ureter or pelvis of the kidney.
2. Ureteral: Calculi, tumors, strictures, kinks, inflammatory states, and diminution or absence of peristalsis due to infection, paralysis, megalo-ureter or other intrinsic conditions of the ureter. Among the extrinsic ones may be considered pressure caused by ovarian tumors, uterine myomata, gravid uteri, seminal vesiculitis, so-called pelvic inflammatory disease, and the like.
3. Vesical: Newgrowths, stones, diverticula, hypertrophies of interureteral ridge, etc.
4. Urethrovesical: Prostatic hyperplasia, malignancy, vesical neck contracture or median bar formation, cysts, essential sphincter spasm, and urethrocystocele.
5. Urethral: Strictures, calculi, tumors, diverticula, fistulae, urethrocele, and acquired phimosis.

PATHOLOGY

In hydronephrosis the increased intrapelvic pressure produces **gradual dilatation of the pelvis and quite frequently of the calices, resulting in partial destruction of the renal parenchyma. The pelvic tension results in pyelovenous backflow and resorption of the waste products which are then liberated by the opposite kidney.** This is demonstrable clinically by retrograde pyelograms in cases in which there is overdistention of the renal pelvis by the radio-opaque material. Experimentally one can demonstrate this phenomenon by injecting phenolsulphonphthalein intraureterally proximal to the site of ligation of a ureter. The dye will appear in the urine from the kidney of the opposite side. Hinman[9] has done considerable interesting work on the relation of urinary backflow to the production of hydronephrotic atrophy.

As is expected, the gross appearance of hydronephrosis varies somewhat with the type and site of obstruction, while the parenchymal changes are microscopically similar irrespective of the point of obstruction. The distention may be mostly intrarenal in the marked intrarenal types of pelves, and, usually, obstruction in the lower ureter or near the bladder results in relatively less blunting of the calices than does that in the upper ureter or kidney pelvis. Conditions of partial distentions of the kidney due to obstruction of one or more of its calices may be termed hydrocalicosis. In those cases presenting infection there is greater rapidity of the process with resultant greater destruction of renal tissue. Partial obstruction often gives rise to an enormous degree of distention and may be designated as closed hydronephrosis of complete obstruction or to intermittent hydronephrosis in which the obstruction may be, variably, complete or partial or even absent. It is in these patients suffering open hydronephrosis that we find huge sacs. In 1742, Samuel Glass described a postmortem finding of thirty gallons of fluid in a hydronephrotic sac, and there are a number of reports in the literature of enormous collections of fluid, varying from thirty to thirty-six liters (Legrand, 1861; Ayer, 1893; Kuster, 1896-1902; Ferguson, 1910; Cathelin, 1913; and Young, 1913). From the reports, one may conclude that the reason these hydrops renales have developed to almost unbelievably large proportions is that they have escaped infection.

The gross changes are classical. On section, one notes marked flattening of the papillae and a thinning out of the medullary zone. The natural renal lobulations are more marked and the larger blood vessels form definite radial bands on the pelvic wall. In cases of marked hydronephrosis, the kidney is reduced to a mere shell.

Practically all of the advanced cases show some degree of infection. Often it is this condition that leads to an examination which results in the diagnosis of hydronephrosis. Pathologically, infected hydronephrosis is very similar to pyelonephritis in so far as the renal parenchyma is concerned. If infection occurs in the early stages of hydronephrosis, secondary atrophy may set in, which sometimes leads to a definite pyonephrosis. Cases of pelvic calculi with intermittent complete obstruction of the outlet are apt to present such a diseased state.

SYMPTOMS AND SIGNS

Obviously, the various factors producing hydronephroses may present different trains of signs and symptoms. For example, the classical knifelike pain in acute ureteral calculi may be contrasted with the vague, indefinite pain of the low-grade intermittent neurogenic ureteral spasm.

The most constant symptom produced by the hydronephrosis itself is dull backache, usually in the affected loin. Ordinarily the pain is intermittent, being present only when the pelvis of the kidney is distended. It may be affected by position, as in those cases produced by ptosis of the kidney when the patient is standing. As a rule, walking or standing for a period of time considerably aggravates it. Definite relief may be obtained by reclining, and usually more relief is obtained when lying on the back rather than on the affected side. Lying on the opposite side, as a rule, gives the greatest relief.

In nearly all cases the urine is of low specific gravity due to the thinned cortex of the kidney. Following relief from pain there may be a history of diuresis.

If the diseased kidney becomes infected the urine will become hazy or cloudy with pus or blood and the lower urinary tract may become involved presenting urgency, frequency, burning or tenesmus. Depending upon the extent of the infection the patient may or may not have fever.

Occasionally the patient may complain of nausea or vomiting. This complaint, as in the cases of pyelitis, has in our experience, been most frequently seen in children.

We have seen one case which complained only of epigastric pain with no history of costovertebral backache and several who had been labelled neurasthenics because they complained of atypical abdominal pain, not clearly incriminating any organ.

Physical examination in a large percentage of these cases will reveal nothing of note, but unless the physician carefully examines the patient he will not only fail to note other causative factors of disease but he will miss palpating a number of kidneys so affected.

LABORATORY FINDINGS

Microscopic examination of the urine may reveal erythrocytes or leucocytes or both; the urine may be of low specific gravity and it may be intermittently cloudy; albuminuria may be present; **but too much emphasis cannot be placed upon the fact that a "negative" urine does not mean that a patient does not have hydronephrosis.**

DIAGNOSIS

Any person suspected of having hydronephrosis should be considered as a subject for pyelography. This statement applies to infants and children as well as older persons. Last year Kretschmer[10] reported a series of 101 cases of hydronephrosis in infants and children.

The intravenous pyelogram is useful in this group of urological conditions, but one must exercise considerable judgment in interpretation of the films, resorting to retrograde pyelography in every case in which doubt arises.

The diagnosis of hydronephrosis can, of course, be made by the cystoscope through the ureteral catheter, if there is to be a stasis of urine in excess of seven cubic centimeters in the kidney pelvis; but it is advisable to follow this procedure with the instillation of ten per cent sodium iodide or other radioopaque material into the kidney pelvis with x-ray of it in order to study the kidney adequately. The ureteral catheters are utilized further to collect specimens of urine from the two sides for microscopic study and cultures, and for determination of degree of differential renal function as shown by excretion from the kidneys of dyes administered intravenously. The diagnosis of hydronephrosis can be definitely established without the aid of x-ray but this adjunct is frequently necessary to determine the cause of the hydronephrosis.

Unless secondary infection supervenes hydronephrosis may progress to a marked degree and still be symptomless. These cases will continue to go undiagnosed, inasmuch as nobody is radical enough in his urological concepts to advocate cystoscopy or renal roentgenograms in symptomless patients; but we can markedly increase accuracy of diagnosis by obtaining cystoscopic examinations and pyelograms on cases who present themselves with symptoms which cannot be attributed to some other viscus.

TREATMENT

The treatment of hydronephrosis necessarily varies with the type of kidney with which we are dealing, and the causative factors of the state. If the hydronephrosis is small, the kidney function good, and the etiology is proved to be atony of the ureter, cystoscopic drainage at fortnightly intervals alone is usually of marked value. It need not be emphasized, however, that before the upper urinary stasis is blamed upon neurogenic origin, other more easily proved causes must be ruled out.

Ureteral calculi should be removed by cystoscopic manipulation if possible; if not, they must be extirpated surgically. Kidney stones likewise require surgery if they are too large to pass voluntarily or by kidney manipulation. Tumors, either within or without the kidney or ureter, require removal; inflammatory conditions should be cleared up by oral medication or cystoscopic applications; strictures should be dilated; fibrous bands or aberrant blood vessels exerting pressure upon the ureter or pelvis of the kidney should be free surgically; extra-urinary causes such as seminal vesiculitis or so-called "pelvic inflammatory disease" should be cured, if possible, by conservative measures.

In those cases which present ptosis of the kidney, nephropexy usually produces, if correctly performed, gratifying results. We make special mention of this procedure here because it has been unjustly condemned because of frequent post-operative recurrence of the nephroptosis. It is true that, even when performed by expert hands, the ptosis may recur but the correction of ureteral kinks, severance of aberrant vessels and the like, thus providing a free course for the ureter, will often relieve the stasis even though the kidney return to an abnormally low position.

If the obstructive factor lies in the lower urinary tract it is frequently more apparent than those of the upper and for this reason the diagnosis as to etiologic agent may often be made by cystoscopy without x-ray aid. Thus, at cystoscopic examination, it may be apparent that we are dealing with hyperplasia of the prostate which should be resected or enucleated. Likewise, bladder stones, tumors, diverticula, or contractures require removal.

In outlining a plan of treatment for the patient with hydronephrosis, the condition of the affected kidney will often determine the type and extent of the corrective procedure. If the hydronephrosis is unilateral, the kidney of the opposite side has compensated and the function of the affected side is poor or nil, then, obviously, it is wise to perform a nephrectomy. In cases presenting marked pelvic dilatation with moderately good renal function on the opposite side, one must attempt to save the kidney. If function does not return following removal of the etiological agent, resection of a portion of the hydronephrotic sac may be of value. Pelvo-plasties and ureteroplasties have produced good results in the hands of many urologists, but it must be stated that considerable judgment must be exercised in the selection of cases for these procedures; furthermore, they require the skill of an experienced urological surgeon. The general surgeon will do well to limit himself to the more common procedures.

CONCLUSION

In this age of fast living, in which increasing demands are being placed upon the kidneys, the physician intrusted with the faith and confidence of his patient must not needlessly sacrifice precious renal tissue.

The time has come when the cystoscope and x-ray should be within the reach of every patient. For the average case of hydronephrosis the services of a highly trained urological specialist should not be necessary. Ordinary familiarity with the management of the cystoscope should be sufficient for one to pass ureteral catheters to the kidney pelves for determination of pelvic stasis in most cases. As a rule x-ray diagnosis of the condition is not difficult. Highly specialized aid may be necessary only in determining obscure causes or for highly technical corrective procedures.

Above all, it must be remembered that there are few conditions which present more obscurity in diagnosis. Many of the cases will not be found unless we are constantly on the lookout for them.

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Cardinal Points in the Diagnosis and Classification of Heart Disease*

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HEART DISEASE is by far the leading cause of death today, there being approximately twice as many deaths from it as from the next common cause, which is cancer.

As the greatest "killer" in our midst today it should be most vigorously pursued as "Medical Enemy Number One." Is it not logical to give the greatest battle to the most powerful enemy?

Heart disease is not something inevitable that comes along in life as a matter of course. Each type has a specific cause, and, although relatively little in the way of prophylaxis is being accomplished, we can best prevent it when we keep in mind the known specific etiological factors.

When found to have most any type of heart disease I fear that many a patient is dismissed from the office and from the physician's further concern with a prescription for digitalis and the advice to get plenty of rest.

While both digitalis and rest are fundamental treatments, we should concern ourselves more with the probable cause of the particular patient's illness. If, for instance, there is evidence of hyperthyroidism, or of syphilis as a cause, the treatments would be quite dissimilar to that of other types.

As a result of the increased attention that heart disease is receiving, some of our former concepts are undergoing great changes. Formerly the anatomical lesion received the greatest emphasis and was most often used as a basis of prognosis. The etiological agent of a given lesion received relatively small consideration, and the criterion of whether or not a patient had heart disease was to many physicians the presence or absence of a murmur.

It should be recalled that a patient may be near death with organic heart disease, yet not have a murmur; and that a patient may have a distinct murmur, yet not even have organic heart disease (functional heart disorders). Cabot states that sixty-five per cent of heart disease is non-valvular, while Halsey states that seventy-seven per cent of heart disease is non-valvular and that only twenty-two per cent is valvular. Consequently, we see that the vast majority of cardiac cases does not even have a murmur.

We should no longer attach all importance to fine distinctions in types of murmurs; nor should we be satisfied with indefinite diagnoses, such as "organic heart disease" or "chronic myocarditis." The etiological diagnosis is the preferred one and should at least be included in the final summary, together with the anatomical and physiological diagnoses when possible. Of course, two or more etiological types may co-exist.

We have learned that the condition of the heart musculature is of the greatest importance—greater than deformities of the valves and their resulting murmurs. I wonder if there are not some of us today who still depend too much on what we hear through the stethoscope to the exclusion of other signs and symptoms of disease that may be relatively obvious.

A careful history is most essential. In a general way the most significant points suggesting heart disease are unusual shortness of breath, edema of the ankles, precordial or epigastric pain, as well as various digestive disturbances.

According to the criteria of the American Heart Association, the various diagnostic methods employed are (1) complete physical examination including the determination of temperature and blood pressure; (2) electrocardiographic examination as an aid in appraising the nature and extent of structural changes in the myocardium; (3) roentgen ray examination using teleo-roentgenography and fluoroscopy, or both, to ascertain the position, size and shape of the heart and blood vessel; (4) Wasserman test; (5) blood counts; (6) other tests when indicated (as, for example, the basal metabolic rate in suspected thyroid disease).

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*Read before the Section on Medicine at the Seventy-first Annual Session of the Mississippi State Medical Association, Jackson, April 20, 1938.

While the electrocardiograph and x-rays are not always available, the most important one of these aids is always available—that is, the physical examination with the classic divisions of inspection, palpation, percussion, and auscultation.

It is important that the procedures come in the order named with inspection first and auscultation last. I cannot emphasize too strongly the importance of this definite routine. Instead of approaching the patient the first thing with the stethoscope and listening to the upper precordium through an unbuttoned collar, perhaps, the patient should in the beginning be exposed to the waist and the use of the stethoscope reserved as the final and confirmatory procedure. The use of the stethoscope alone is usually not sufficient to determine the etiological type.

Inspection should include a search for precordial bulging, the point of maximum apex impulse (most important in determining size), and other localized impulses or points of retraction; for the presence of edema in dependent parts, particularly the ankles. Inspection also includes a search for cyanosis, pallor, petechiae, vigorous and abnormal pulsations of the great vessels of the neck, and clubbing of the fingers.

Palpation should be first used to locate the apex impulse, in order to approximate the size of the heart. With the hand flat against the precordium abnormal impulses and thrills may as well be determined. Palpation is also used to examine for edema, especially pitting edema, enlargements of the liver and spleen, the pulse rate and the compressibility and hardness of the arteries.

Percussion is used to outline the area of cardiac dullness. Auscultation is used to determine the presence or absence of murmurs, the character and quality of the sounds, and the cardiac rhythm, as well as the point of maximum impulse.

Of all the procedures none is more valuable or more neglected than those used to determine heart size. The majority of heart diseases results in ultimate clinical increase in heart size, and this is of great diagnostic value in determining the presence of heart disease. Cabot quoted by Halsey states that simple hypertrophy is the most common heart lesion, while Hitzig states that heart failure to the degree causing dyspnea in chronic heart disease is always associated with enlargement. You will note that inspection, palpation, percussion, and auscultation are all useful in helping to determine cardiac size.

The differential diagnosis of heart disease is obviously not within the scope of this paper, neither is a discussion of technical electrocardiographic findings; however, we may well review the principal clinical characteristics of the main organic etiological types. A convenient condensed classification is used.

The first group includes those types usually seen before the age of forty; the second group those types usually seen after the age of forty.

GROUP I
(Usually seen under 40 years of age)

A. Congenital heart disease

B. Heart disease due to infections and toxins:
  1. Rheumatic fever
  2. Bacterial endocarditis
  3. Scarlet fever, diphtheria and other acute infections
  4. Hyperthyroidism

GROUP II
(Usually seen over 40 years of age)

C. Heart disease due to diseases of the coronary arteries:
  1. Angina pectoris
  2. Coronary thrombosis

D. Syphilitic heart disease

E. Hypertensive heart disease

F. Arteriosclerotic heart disease. (Associated with systemic arteriosclerosis)

Functional heart disease disorders are purposely omitted.

A. **Congenital Heart Disease.** Congenital heart disease is essentially a disease of infancy and childhood, only a few living beyond the adolescent period. The classical signs are cyanosis that becomes pronounced upon exertion, clubbed fingers, and a loud murmur over the base of the heart, usually systolic in time. Other developmental defects are often associated with congenital defects of the heart. The incidence of congenital heart disorders will average somewhat less than one per cent:

however, Wood, Jones, and Kimbrough found an incidence of one to one and one-half per cent.

B. 1. **Rheumatic Fever.** Halsey estimates that 90 per cent or more have cardiac injury following rheumatic fever. Most estimates run from 60 to 100 per cent. The most common cause of heart disease under 40 is rheumatic fever. In the middle Atlantic and New England States rheumatic fever is estimated to cause from 25 to 50 per cent of all heart diseases. The lowest incidence that I have seen reported is 3.4 per cent of 1660 cases at Galveston, Texas, by Schwab and Schultz, but I feel sure that many of their cases listed as unknown would have shown rheumatic lesions at autopsy.

While we do not see a great number of frank rheumatic fever cases here in the South, as we do in the more temperate regions, we often have rheumatic equivalents such as "growing pains," recurrent tonsillitis and less often chorea. The rheumatic infection may be so mild as to not be recognized, or else to be mistaken for a cold; therefore, a negative rheumatic history is only presumptive.

It has been pointed out by McLester, Longcope (quoted by McLester) and many others that the typical findings of rheumatism are very often found at autopsy in patients with absolutely negative rheumatic histories. A history of rheumatism is not essential to a diagnosis of rheumatic heart disease.

Mitral stenosis is the most typical lesion. However, systolic murmurs are also heard, and the heart is usually enlarged. Libman has found fifteen years to be the average life span following the onset of rheumatic heart disease.

2. **Bacterial Endocarditis.** Fortunately, this type is relatively rare. It is often preceded by heart damage, as by rheumatic fever, and congenital heart disease, and it results in great damage to the mitral valve with the formation of vegetations. The usual criteria are the appearance of an organic murmur while the patient is under observation, a change in the character of the murmur, septic type fever, embolic phenomena, and tachycardia.

3. **Diphtheria, Scarlet Fever and Other Acute Infections.** These cases are recognized not by any particular lesions so much as by the history of the preceding acute infection and myocardial failure. The diagnosis is more certain when the heart is known to have been normal preceding the acute infection.

4. **Hyperthyroidism.** It is still a debated question as to whether hyperthyroidism is a cause of heart disease or not, many contending that previous organic disease existed in the apparent thyroid cases. The characteristic signs, in addition to the signs of hyperthyroidism, are tachycardia, hypertrophy, and auricular fibrillation. It seems reasonable to say that the cardiac overwork and the toxic degenerative changes would cause permanent myocardial damage. Schwab and Schultz report a country wide average of 1.9 per cent incidence of thyroid heart disease in a large series of heart cases.

The remaining types of heart disease comprising the second group are seen most often after the age of forty.

C. Coronary heart disease might be placed under the head of arteriosclerosis, as most cases are attributed to this cause. It seems most convenient, however, to study it under the heading of coronary disease.

1. **Angina pectoris,** or the anginal syndrome, is caused most commonly by sclerosis or by spasm of a coronary vessel, resulting in ischemia of the heart muscle, but may be caused by other disorders about the base of the heart. The incidence varies from two to ten per cent, averaging lowest in the South and highest in New England. The diagnosis is usually not difficult, but more than thirty disorders with which it has been confused have been reported by Herrick recently.

The symptoms are too well known to need repeating, however, the most common symptoms are acute precordial pain following exertion that radiates most often down the left arm, a sense of chest constricton and a fear of impending death.

2. **Coronary Thrombosis or Occlusion.** Anginal pectoris must be differentiated from coronary occlusion, in which there is sudden excruciating pain in the substernal or epigastric region plus the signs of severe shock. Coronary occlusion is the cause of most cases of sudden death due to heart disease, and most deaths attributed to "acute indigestion" are in reality due to coronary occlusion. It is rarely seen in people who are not subject to mental strain, as in the negro, being four times as common in the business and professional classes as in the laboring class. Physicians are especially vulnerable.

D. **Syphilitic Heart Disease.** The diagnosis of this type is made by suspecting it and looking for it. It is a not uncommon type, most authorities quoting the incidence as eight to ten per cent of all cardiac cases. It is especially high among negroes, due, no doubt, to the high incidence of syphilis in this race. A history of previous syphilis, signs of tertiary syphilis and the signs of aortic regurgitation, or of an aneurysm, are most suggestive. However, routine serological examination will suggest even more. All suspicious cases should have a spinal fluid examination in spite of a negative blood Wasserman.

E. **Hypertensive Heart Disease.** Hypertensive heart disease is the most common type of heart disease seen in the country as a whole. Within itself it causes more deaths than cancer, and is becoming each year more common. In this section approximately half of the cases of heart disease that come to our attention are hypertensive in origin. The highest incidence is in the South, and the lowest proportion is in those regions where rheumatic fever is most common. A country wide average from statistics reported by Schwab and Schultz in over 6,000 cases is 52.4 per cent.

Hypertensive heart disease may be termed as that heart disease found with associated cardiac enlargement and persistent hypertension. A hereditary influence and the stress and strain of modern life are thought to predispose to the hypertensive state, and that this state in turn through its increased load on the heart and the vascular tree causes the cardiac failure and hypertrophy. Arteriosclerosis is often found at autopsy.

F. **Arteriosclerotic Heart Disease.** We may loosely term this type as that found associated with evidence of arteriosclerosis. It is rarely found before the age of forty and is most common in the sixth and seventh decades. The American Heart Association states that "It is frequently difficult or impossible to separate arteriosclerosis from hypertension as a cause of heart disease, because they so often co-exist." The differentiation is made even more difficult when we remember that hypertension within itself may cause sclerotic changes in the arteries. Since most cases of hypertensive and coronary heart disease have an undoubted sclerotic background, we see that the great majority of all heart diseases falls in the arteriosclerotic group. Again we may recall Osler's observation that "A man is as old as his arteries."

In this paper a plea has been made for a more careful examination for heart disease based upon an etiological classification, so that a more individualized treatment may be carried out.

An etiological classification of the most common types of organic heart disease is presented, and some of the cardinal points in the diagnosis of each type have been reviewed.

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Suppurative Pericarditis[*]

By T. H. RAYBURN, M.D.
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EMPYEMA of the pericardium is that phase of pericarditis which comprises the collection of a purulent exudate in the pericardial sac. It is very unusual for such an exudate to become purulent, but when this complication does occur the case immediately becomes surgical. Pyopericardium, occasionally primary, usually follows some acute bacterial infection and, in the most virulent cases, pus may generate so rapidly that death may follow in from three to four days, almost before intervention is possible.

ETIOLOGY

The usual source of infection is by way of the blood stream from some primary focus. Rarely it may arise from direct extension from the pleura or mediastinum. Pneumonia, acute purulent arthritis, and tuberculosis, in the order named, account for the majority of cases. All of the acute infectious diseases are occasional offenders and next in order are penetrating injuries.

INCIDENCE

The present status of purulent pericarditis places it in the unfortunate category of being recognized at the autopsy table many times more frequently than it is clinically. To the present[§] less than two hundred cases have been reported in the literature that have been treated by pericardotomy. On the other hand, Musser and Norris reported an incidence of twelve and six-tenths per cent of acute pericarditis in more than 2000 autopsy cases of pneumonia, and Stone in three hundred cases dying of pneumonia at Fort Riley found that fifteen per cent had purulent pericarditis. Madden of Columbia, S. C., in 1936, reported that of the more than 4500 cases of lobar pneumonia occurring in the Carolinas during the years 1932 and 1933, an estimated 226 persons died of purulent pericarditis, and that during those same two years the Duke Foundation reported only three pericardiotomies.

SYMPTOMS AND SIGNS

The symptoms and signs of this condition are those of fluid in the pericardial sac plus sepsis. Otherwise distinctive symptoms may be masked by those of the primary disease. Purulent pericarditis is to be suspected when the heart shows beginning signs of failure before the height of the primary disease is reached or later when there is prolonged convalescence with persistent fever. If the collection of the fluid is large the cardiac impulse disappears, cardiac dullness becomes much extended, heart sounds are weak and rapid, and pulse may be imperceptible. Cyanosis, distention of veins of thoracic wall and cervical regions, and general edema may occur relatively early in fulminating uses. The x-ray appearance is distinctive, giving the wide shadow typical of distended pericardium. Diagnosis is confirmed by exploratory puncture through the left costoxiphoid angle or through the third, fourth, and fifth left and fourth or fifth right interspaces.

PROGNOSIS

The immediate as well as the late prognosis in purulent pericarditis is serious and immediate drainage is imperative no matter how sick the patient may be, and offers the only hope. The majority of cases die during the acute phase; a small number survive unoperated and become chronic invalids. Venus cites a mortality of fifty-six and two-tenths per cent in one hundred ninety-seven cases operated in acute stage. Porter cites fifty-one cases incised with twenty recoveries and thirty-one deaths. Of the chronic cases treated by pericardial decortication about seventy-five per cent improvement was noted in reported cases.

TREATMENT

Paracentesis of the pericardium, while essentially a diagnostic measure, is of great value in improving heart action preparatory to surgical drainage in those cases where any appreciable quantity of pus may be aspirated. As soon as possible after diagnosis is established the pericardium should be incised and thoroughly drained. This procedure offers practically the only chance of complete recovery. The pericardium, unlike the pleura, is very tolerant to surgical procedure, gives rise to little pain and rarely gives rise to shock. The condition of the patient will usually demand local anaesthesia.

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[*] Read before the Northeast Mississippi Thirteen-County Medical Society, Tishomingo State Park, Tishomingo, Miss., June 21, 1938.

[§] (March, 1936, as reported by Madden of Columbia, S. C.)

CASE REPORT

Our patient, a white male, age two years, whose past family history was irrelevant, was treated three weeks before admission for laryngeal diphtheria. The parents stated that he was in acute distress for only two or three days and improved rapidly after the administration of diphtheria anti-toxin by the family physician. At no time was temperature high and the only complaints at onset were mild fever, restlessness, and noisy difficult respiration. Progress was apparently satisfactory for about one week when parents noticed that he was not gaining further, became listless, and had considerable abdominal distention but little or no fever. All symptoms gradually grew worse and by the middle of the third week he had become so alarming that he was referred for admission to the hospital.

On admission to the hospital, January 4, 1938, the child was alarmingly ill, facies anxious, breathing was rapid, labored and somewhat irregular, and he was definitely cyanotic. The face, upper chest wall, and lower extremities were visibly edematous and veins of anterior chest wall and cervical region were greatly dilated. Temperature 98, pulse 100, respiration 32, W. B. C. 9500, polys. 68, lymphocytes 32, and urinalysis negative. There were no breath sounds from left lung and entire area was flat to percussion. The area of pericardial dullness definitely extended to the right and heart sounds were distant and indistinct. X-ray at this time revealed a shadow characteristic of complete pleural effusion on left with pericardial shadow extending far to the right. Soon after admission 110 c.c. of thick white pus without odor was aspirated from left pleural cavity. Bacteriological examination was not available. Immediately became more comfortable and rested fairly well until next day, January 5th., when an additional 110 c.c. was aspirated from left pleura. Condition again improved and on the morning of January 6th., the left pleural cavity was drained through an intercostal incision under local novacaine and about 300 c.c. of thick white pus evacuated. He withstood the procedure without embarassment, dyspnea improved and cyanosis and edema subsided. He took nourishment and appeared generally improved until the fifth day when all symptoms returned and condition again became alarming. On the 7th day x-ray revealed an enormous pericardial shadow with only a small margin of active lung tissue remaining.

At this time paracentesis through the left costoxiphoid route was performed and very thick white pus was obtained, though due to heavy consistency, in insufficient quantity to relieve the pressure.

He was immediately prepared for pericardiotomy which was performed under local novocaine. Beginning at left third interspace just to left of sternal border the incision was carried downward to the level of 6th space and extended outward to the left nipple line. A flap was raised down to the costal cartilages and a two-inch section of fifth and sixth cartilages were removed. The fifth intercostal bundle was severed and ligated and the internal mammary vessels were exposed and ligated. The border of the left pleura was retracted laterally and the pericardium was exposed and incised for a distance of about two inches and approximately 500 c.c. of thick, white pus of the consistency and appearance of butter-milk was evacuated.

The edges of the pericardium wound were stitched to the deep fascia and the sac irrigated with warm normal saline. The skin and muscles to outside were approximated with loose interrupted sutures.

He withstood the procedure well and pulse volume increased, respiration improved and appearance was satisfactory for first two days. The post-operative condition continued satisfactory, took fluids and nourishment freely and appeared on way to recovery. However, on morning of third day soon after taking a breakfast cereal he became restless, pulse became irregular and he expired rather suddenly. Autopsy was not obtained.

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Treatment of Cancer of the Breast

By W. R. K. BECK, M.D.
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IT IS very important to correlate the grading of cancer in different stages of anatomical development, that we may plan wisely the best method of treatment. There are recognized four grades of cancer as seen under the microscope, and we may also divide the stages of anatomical involvement into four stages. In the former the grading of cancer is the proportion of undifferentiated cells. It is percentage grading and is as follows:

Grade	Differentiated cells.	Undifferentiated
1	100 to 75%	25 to 0%
2	75 to 50%	25 to 50%
3	50 to 25%	50 to 75%
4	25 to 0%	75 to 100%

Anatomical Stages:

Stage 1. Breast alone involved.

Stage 2. Breast and axilla involved.

Stage 3. Breast, axilla, supraclavicular area involved.

Stage 4. Breast, axilla, supraclavicular and other areas involved.

Radiosensitivity of grades:

Grade 1. Least sensitive.

Grade 2. More sensitive than grade 1.

Grade 3. More sensitive than grade 2.

Grade 4. Most sensitive of all grades.

It must be recognized that radiosensitivity does not carry with it a certainty of cure by radiation, nor does radio-resistance imply incurability.

In the fundamental principles governing behaviour of tumors to radiation, there are considered those factors reflecting the embyronal quality which include the high metabolism with abundant autolytic ferments, rapid growth with accelerated mitosis and an abundant, delicate and immature vascular supply. Radiosensitivity increases with increasing embyronal quality and anaplasia of the tumor tissue.

The radio-sensitive types — undifferentiated cells — show early and rapid growth and lymphatic metastasis. Invasion of blood vessels is rare in this group.

In highly radio-resistant cancers of the breast the tumor is more adherent, more indurated, smaller in size, surrounded by a zone of reaction of connective tissue and blood vessels which may be very extensive,—the differentiated cells. Lymph node involvement is rare. Invasion of the blood vessels is common.

We consider cases of high radio-sensitivity to be those that show a diminution of the neoplastic masses after six, eight or ten days of irradiation with even a small daily dose—about 250—the daily dose being in relation to the threshold of a low cytolytic effect. In these cases a total disappearance of the tumor is observed with 7000r after forty days.

If the tumor is only slightly radiosensitive and there is a possibility of an incomplete recession or a residual mass being left then surgery becomes necessary.

A tumor with differentiated cells is very radio-resistant and radiation preceding surgery seems unnecessary. This tumor the surgeon is almost certain to remove in an extensive operation, and radiation seems just a loss of time.

On the other hand if the mass is moderately differentiated there may be some daughter cells which must be destroyed by irradiation. This is best done before surgery, but can be accomplished afterwards, better results being obtained if irradiation is given shortly after operation, as the cells seem to respond better at this time, and irradiation does not interfere with the healing of the wound.

Preoperative Irradiation. Irradiation devitalizes or destroys the more malignant types of cells, and reduces the chances of dissemination by surgery, and the number of recurrences following operation.

For movable tumors with large movable nodes the ideal procedure is to begin with radiation.

Normal tissue is less receptive to implantation after preoperative irradiation—biologic experiments (Murphy, Russ and Scott) indicate that in addition to the effect of irradiation on the malignant cells there is an effect on normal tissue which is detrimental to implantation of cancer, in all instances malignant cells grew better in the unirradiated areas. This effect was evident when half of an erythema dose was given, and was also effectual even when the irradiation was given several days before the inoculation. In view of the above findings all patients would be given preoperative irradiation.

Postoperative Irradiation. Postoperative irradiation is the accepted procedure in most of the large clinics both in this country and abroad. It is given immediately following an operation; this includes those cases that are doubtful operative cases, and those that are grades 3 and 4, and all cases in stages 2 or worse. In many surgical procedures the local excision is practiced and followed by irradiation. Patients that have a moderate grade of malignancy in stage 2 require a prolonged treatment as they are not so susceptible to radiation.

I am not an advocate of the wait-and-see system, that is to see if cancer develops following an operation of the breast. This is undoubtedly a very dangerous procedure. The traumatism of an operation may cause the cells to become more virulent and thus increase the danger of proliferation and malignancy. In the case of emboli and transplantation it can readily be seen that irradiation would undoubtedly be very beneficial to preventing local recurrences and metastases. It may be very difficult in many cases to clean out all of the lymph nodes of the axilla, and should one node be infected the only recourse would be irradiation. By studying the lymphatics of the breast and axillary space, one can well realize the very great danger of leaving cells in the field of operation, and many times this is proven by stitch hole recurrences.

In these cases most of them come as last resort, and it requires all the skill and ingenuity of the radiationist to give the patient a curative dose. This has to be done regardless of the patients' general health, and many times because of the disease and other circumstances they are not very strong, and have very little reserve. Then, too, the lesion or lesions are not in the breast and suspended from the chest, but are situated directly on the chest wall, and thus increases the danger of a pneumonitis or a mild pleurisy following the treatment. But by being very careful of the direction of the beam one can eliminate that danger.

In irradiating the axilla the rays must also be directed along the infraclavicular region and supraclavicular space. In recurrent cases all fields must be irradiated. In order to give a curative dose one must remember that it takes quite a lot of rays to destroy a carcinoma and slightly more for a sarcoma in vivo. In vitro it requires about one erythema dose less than in vivo. This was proven by Wood and Prime many years ago. Briefly they say as follows:

"Approximately four erythema doses of roentgen rays given continuously, and filtered through 3 m.m. of aluminum are required to kill mouse carcinoma, and five such doses to kill mouse sarcoma exposed in vitro; but occasionally some cells may escape six doses. Approximately six erythema doses of roentgen rays are required to kill sarcoma cells in vivo as compared to four erythema doses required to kill the same cells in vitro."

To be sure of the amount of radiation necessary to destroy carcinoma cells, Hayes Martin, of the Memorial Hospital, N. Y. City, has definitely proved that it requires from six to ten erythema doses to destroy carcinoma cells. Tissue dosage calculation was accomplished by him many years ago.

Acquired Resistance. It may be well to refer to cases that following repeated irradiation acquire a resistance to the treatment and cease to respond. This unusual condition occurs in mycosis fungoides, the leukemic group, and in some cases of psoriasis. It seems that cells that have received long and continuous treatment develop a resistance to the treatment. Epithelioma have developed the same acquired resistance according to Regaud.

Inoperable Cases. There are many cases too far advanced for an operation, in stages 2 and 3. Then radiation becomes the only treatment available for such a case. In stages 2 and highly dedifferentiated which are very radiosensitive many can be and are salvaged. Cases in stages 2 or 3 which are not operable of grades 2 and 3 must be irradiated but it seems that large doses must be given over a long period of time and to six or more ports I would say that not less than 8000r should be given in such cases. Cases in grade 1, stage 2 or 3 should be given about the same amount of treatment or a little more if the patient is strong and has a good reserve.

Case No. 1. M. P. H. This was a typical case of stage 2 and I think grade 3 or 4 carcinoma of the right breast with axillary metastases came to my office on December 16, 1935. She had definite movable masses in her breast and axilla. Her age was 59 years. She was the mother of seven children living and one dead. No miscarriages. History of an abscess twenty-five years ago in the same location of the tumor while nursing a baby.

The skin was erythematous over the mass and was adherent to it. The connective tissue reaction was about the size of the mass. She said the mass was increasing in size. It had begun as a lump in her breast about thirteen months earlier.

Her father had died of a cancer on his nose many years before. This probably was a basal cell carcinoma. She had not menstruated since she was fifty, or nine years had passed since the usual flow had ceased. All other history was negative except that she had acne rosacia over face and nose of a moderate degree. She had pain in her chest.

She was given treatment fields No. 5,1500r to each of five ports with areas approximately 10x10 cm. The distance was 60 cm. from the target and a half copper and one m. of aluminum were used as filters. The voltage was 200 kv. and 250r were administered at each treatment, total r given being 7500. She began her treatments on the sixteenth of December and the series was finished about the 16th of January, 1936. She had no nausea or vomiting.

At the beginning of her treatments the mass was 6x5x5 cm., extending down under the nipple and was freely movable on the chest. It was freely movable as were the axillary nodes. No adenopathy was found in the clavicular areas.

She returned on May 3, 1936, for an examination and I made the following notes. All erythema of the skin has faded and it is only slightly adherent to the mass. A small residual mass can be felt just above and to the outer side of the nipple. Axilla is negative. Nodes are absent at this time.

December 29, 1935, the masses began to recede and measured 21x4x3 cm. The visit in May was for a smaller series, and completely recovered the residual mass. She has been in perfect health ever since and has had no recurrences.

CONCLUSIONS

1. Showing possible relations of grading, radiosensitivity and anatomical stages.
2. Value of preoperative irradiation before surgical intervention.
3. Postoperative irradiation following surgery and treatment of recurrences.
4. Treatment of inoperable carcinoma. Case report.
5. Acquired resistance.

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THE MISSISSIPPI DOCTOR

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Published monthly at Booneville, Mississippi

Annual subscription $1.00.

Entered as second-class matter, January 19, 1926, at the post-office at Booneville, Miss., under the Act of March 3, 1870.

The next meeting of the Northeast Mississippie 13-County Medical Society will be held in Amory in September. Amory is the home of our medical sage, Dr. G. S. Bryan, and one of Mississippi's ablest surgeons, Dr. Ewing, and in addition, other outstanding men in the profession. They know how to be nice to visitors. You may expect a great meeting in Amory.

We deeply appreciate the half page ad of the Gartly-Ramsay Hospital, of Memphis. This hospital has stood the test of time. Service is its motto and it is a hospital of courtesy, individuality, and personality.

It is probably good human economy for all people to nave adequate medical care. Under present conditions in the small town and rural community in the South there is not one bit of danger in it being applied. Proper living conditions would reduce the need of medical care about forty to fifty per cent, perhaps.

Dr. G. S. Bryan, of Amory, has just informed us that Dr. George W. Crile, of Cleveland, Ohio, will be the guest speaker at the September meeting of the Northeast Mississippi 13-County Medical Society. With Dr. Crile and our own Dr. W. A. Evans on the program, the doctors of Mississippi, Alabama and Tennessee will have in store a rare treat.

A study of precancerous conditions of the female reproductive organs and a search for preventive measures by the general practitioner is one thousand times more important than splitting hairs over the amount of radium and deep x-ray therapy in advanced cases.

The medical profession in tne small town and rural community cannot do the charity that is calling for aid and yet be able to live and keep informed as he should. Charity is on the increase.

Regardless of what else may happen let the people have their choice of doctor and hospital.

If pneumonia serum does good in pneumonia, then the next step should certainly be vaccination against the disease.

Vaccination against smallpox may be a little out of style, but it is still a mighty good public health measure.

The meeting of the Northeast Mississippi Thirteen-County Medical Society at Tishomingo Park on June 21 was a splendid one. The scientific program was up to par and the entertainment was unusually good. The lodge was a nice place for the scientific session and the banquet also. The officials of the park were most cordial and generous entertainers. The doctors of Tishomingo County did their part in fine order, Dr. N. C. Waldrup of Tishomingo, being the most active spirit. The banquet was one of the most bounteous we have ever attended and the local talent displayed its ability with song and music. We were delighted to have a number of visiting doctors from Alabama, and to have the faculty of the

University of Mississippi represented. Drs. Rayburn and Baugh of the local members gave splendid papers and two native sons as visiting essayists, Drs. J. Harley Harris of Memphis, and Guy A. Caldwell of New Orleans, gave us the very best on their respective subjects. The auxiliary had a splendid session along with the medical meeting. Dr. W. A. Evans of Aberdeen, Mississippi's most distinguished international medic, attended the meeting. The September meeting will be held in Amory. Dr. Walker, the silver-tongued orator of Mississippi and the favorite of the auxiliary, extended a most cordial invitation for the June meeting to be held at Houlka, "the hub of the universe," one year hence.

Many changes have taken place in medicine, both in theory and practice, since this writer entered the profession. But even greater have been the changes in medical economics. Then, it was possible for any man of mediocre ability to earn a comfortable living for himself and family by the practice of medicine, in spite of the fact that more men were engaged in the work in most localities than at present. Besides this the fees charged were no larger, (if as large) then than now. There are two prime reasons for the fact that few doctors are meeting expenses now. One of these is that it costs a great deal more to practice medicine now than it did then. The public requires better equipment both in training and in office. But the chief trouble is that so many bills are never paid. Perhaps most people, who can do so, still pay their doctor, but there is an ever increasing number who simply cannot pay for their medical care. There are about 130 million people in the United States and about 130 thousand active doctors. If equal distribution could be made there would be about one thousand people per doctor. If this were true and everybody could pay, no doctor would be burdened and all could make a living. But according to the best figures available the doctors are rendering about one and a half million dollars of free service per day. This amounts to ten dollars per day for each doctor. No other group of business men, or individuals, is carrying such a load. It may be said that the greater part of this load is carried by the city doctors. This may be true, but it is equally true that the greater part of the monies collected is paid to the city doctors. But it is fast becoming true that the rural citizen cannot pay his doctor either. And frequently it happens that those who can pay go to some city for treatment that could, as well, be obtained at home. As the number of indigents increases (and it seems this number will continue to increase), the burden on the doctors will be so great that more and more people will be compelled to go without medical care; for there is no incentive for young men to go into the profession. Only those who are wealthy can afford to do so and but few wealthy men are drawn towards the hardships of a doctor's life and work. So what is to be the solution of the matter? This has become a burning question and as yet no satisfactory answer has been found. This question is agitating both the lay and the medical mind. The old regime, of course, was ideal—when each individual of each family had a family doctor of his own choice. Only under such circumstances can the best work be done and satisfaction be given. Then every doctor did (willingly) some free work, and those who could not pay usually received as good care as those who could. But it seems that such conditions may never be expected again. It is certain something must be done, but **what**? Men, women and children cannot be allowed to suffer and die for want of medical care. No doctor who has a paying practice wants to see socialized medicine. No family which has a trusted physician who has long done the family work wants to see this thing come about. But what of the thousands of men and families who know, from experience, that a doctor's service cannot be expected in case of need? And what of the many doctors who know from bitter experience that they cannot hope to give their families the bare necessities of life that are to be paid for from the proceeds of their professional services? How can this large per cent of doctors be expected to keep abreast in their work—attend medical meetings — pay for books and journals — wear decent clothes — buy new cars when old ones refuse to run — pay debts that are past due — how can these men give thought and study to their work and patients when they are constantly faced with bankruptcy? How can an honest and sensitive man be expected to go on giving his time and thought to his work when he knows that his credit and standing are being questioned because he does not meet his obligations promptly? How can young men be expected to go into the profession when they know that it is impossible for them to sustain themselves and gain and hold the respect of the business world by their own effort under prevailing circumstances? My home county is no different from others in our state and may, well, serve as an example. We have some thirty-five thousand people living in the county. Fifteen years ago we had about twenty-five doctors. They were all fairly comfortable so far as one could see. At least no trouble about obtaining the things necessary for family support was concerned, was evident. These men were mostly at the meridian of life and well established in their work. Now we have only about twelve active men in the county and it is questionable whether any of these are meeting expenses from their work alone. Most of them had acquired some property previously. But one young man has entered the ranks. Some have died (several) and some have gone into other avocations or moved away from the county. There are but two men who have not reached the age of fifty—the average is much above this. Ten years from now there will not be five active men left in our ranks in the county. No man will move in—if any young man enters the profession, he will go to some city to practice. In the county just north of ours there are but five doctors—none of these is below fifty years of age—only one is less than sixty. What should be done about the matter? What can be done? It is not just a local question—it is national. One hundred and thirty thousand doctors should be able to direct the thought and action that is necessary. Just now it seems that there is danger of a split in our ranks. This should not be, but there is need of much thought and possibly new leadership. There is much more to be said but not at this time.

G. S. B.

COMING MEDICAL MEETINGS

The Second National Assembly of the International College of Surgeons will be held in Philadelphia, Pa., with the headquarters at the Bellevue Stratford Hotel on October 13 and 14, 1938.

All members of the medical profession of good standing are cordially invited to attend the scientific program and various clinics. There will be no registration fee.

The annual meeting of the American Association for the Study of Goiter for this year will be held in Washington, D. C., September 12, 13 and 14 in conjunction with the Third International Goiter Conference. I am enclosing a copy of the tentative program for this meeting. A final program will be available at the time of the meeting and will be distributed to all attending physicians at the registration desk on the morning of September 12.

DR. ROBERT M. ADAMS
of Ripley, Mississippi

In the death of Dr. R. M. Adams the medical profession lost one of its choicest members. He was a general practitioner of the highest order. He felt that his responsibilities were sacred. He possessed a splendid literary education, his language was select, his tongue was versatile, his information broad and comprehensive, his judgment sound and his wisdom mature. His health vision projected far into the future. His passion for the conservation of health was deep and sincere inspired by his high estimation of human values. Public health was a passion with him. He preached it for more than a year while with the public health department of the State, and no other man in Mississippi has yet done it so eloquently and with such sincere appeal to the public. Along with his deep concern for public health was his devotion to motherhood. His heart, mind and soul went out for a better day for the mothers in motherhood. In obstetrics he was safe, sound and sympathetic. A new-born baby free of disease and injuries with a mother free of lacerations and damage to organs made him supremely happy. In performing his duty to motherhood he was ever mindful of his responsibility to citizenship, not only pains-taking in aiding a new life to come into the world, but broad in his plans to help build a nation sound and secure. He was not only versatile in general information and thorough in his professional duties, but he carried with him a heart that was kind and sympathetic and a personality that had been quickened by the Divine touch and was full of inspiration and human interest. But few ministers of the Gospel knew the Divine teachings so well as did Dr. Adams and but few could expound them so eloquently. He was a total abstainer from strong drink and clean and chaste in his living. His love for his family was as deep as the waters of the sea. The values they possessed were the greatest of all earthly ones to him. In deed and in truth the profession has lost one of its most noble members, the Mid-South one of its most deserving presidents, his family one of the earth's most devoted fathers, his church one of its most inspirational teachers, and this editor and this journal a most beloved friend, tried, true, and loyal.

AWAY

I CANNOT say, and I will not say
That he is dead—he is just away.

With a cheery smile and a wave of the hand,
As he wandered into an unknown land,

And left us dreaming how very fair
It needs must be, since he lingers there.

And you,—O you, who the wildest yearn
For the old-time step and the glad return,—

Think of him faring on, as dear
In the love of There as the love of Here:

* * * * * *

Mild and gentle, as he was brave—
When the sweetest love of his life he gave

To simple things:—where the violets grew
Pure as the eyes they were likened to.

The touches of his hands have strayed
As reverently as his lips have prayed

When the little brown thrush that harshly chirred
Was dear to him as the mocking-bird.

And he pitied as much as a man in pain.
A writhing honey-bee wet with rain.

Think of him still as the same, I say,
He is not dead—he is just away!

—James Whitcomb Riley.

DR. R. M. ADAMS

"Dr. Adams died at the Baptist Hospital Friday morning, July 1, 1938. He was sixty-five years of age. At the time of his death he was president of the Mid-South Post-Graduate Medical Assembly and also of the North Mississippi Medical Society, local Surgeon of the G. M. and N. Railroad, and teacher of the Men's Bible Class at the Methodist church at Ripley.

"Dr. Adams leaves his wife, Mrs. Pattie Etta Murray Adams; three sons, Dr. W. M. Adams, Memphis, physician; Herman Adams, lawyer of Utica, Miss., and Lorenzo Adams, Ripley; his daughter, Miss Victoria Adams, of Memphis.

"Dr. Adams, prominent in his interest in public health and preventable medicine, was born in Tippah County, Miss. He spent eight years of his early life in Texas.

"He graduated from the Ripley Male and Female College in 1896 and later from the Iuka Normal Institute. After teaching four years, he studied medicine at the University of the South at Sewanee and in the University of Tennessee in Memphis. He took a special course in New Orleans in 1911.

"Dr. Adams was for eight years health officer of Tippah County. In 1925 he did all-time work in Lee County and later spent a year with the educational department of the State Board of Health.

"Well known in medical circles, Dr. Adams had read a number of papers before medical societies that created special interest among the profession. Some of them are "The Midwife Problem," "The Doctor's Responsibility to Motherhood" and "A Challenge to the Medical Profession."

"His enthusiasm and papers on public health led to his election as chairman of this section in the Southern Medical, over which he presided in Dallas, Texas, in 1925.

"As a practitioner his work was outstanding in obstetrics. He was broadly read, in literature as well as medical works. A fine Bible student, he was a Sunday school teacher for years.

"He married the former Miss Pattie Etta Murry, of Dumas, daughter of Dr. W. M. Murry, a member of a family of doctors."

SUCCEEDS DR. ADAMS

Dr. Lawrence W. Long, Jackson, Miss., who now succeeds to the presidency of the Mid-South Post-Gradute Medical Assembly following the death of Dr. R. M. Adams, of Ripley. Dr. Long has served as secretary of Central Medical Society, as vice president of the Mississippi State Association and is now a member of the council. He is a very active leader in organized medicine. He is now chairman of the section on surgery for the Mississippi State Medical Association. He has vision and ability as a leader and will fill with distinction the office of president of one of America's leading medical associations.

HEALTH OFFICER CHOSEN

Dr. George W. Mast, of Holmes County, who has returned to Lexington from John Hopkins University after a leave of absence to do research work in public health and hygiene, has been elected by the Board of Supervisors of Washington County to become health officer of that county.

The transfer will be effective July 1. Dr. Mast will succeed Dr. J. W. Shackelford, who resigned to become the director of laboratories for the Oklahoma health unit.

Dr. Harry Nelson Waggoner of Dyersburg, Tenn., will be the new health officer of Holmes County. He is a graduate of the University of Tennessee, has had public health training at the University of Vanderbilt, and has had experience in Coahoma, Pearl River and Lauderdale Counties.

Dr. Mast was in Northeast Mississippi during the epidemic of infantile paralysis year before last. He is worthy and well qualified for any advancement that may come to him.

PRESIDENTS OF THE TRI-STATES MEDICAL ASSOCIATION AND THE MID-SOUTH POST GRADUATE MEDICAL ASSEMBLY

— 1914-1938 —

TRI-STATES

Dr. John Darrington, Yazoo, City, Miss., 1914; Dr. G. B. Gillespie, Covington, Tenn., 1921, (Dec'd.); Dr. C. M. Harwell, Osceola, Ark., 1923; Dr. L. A. Yarbrough, Covington, Tenn., 1924, (Dec'd); Dr. W. H. Anderson, Booneville, Miss., 1926; Dr. F. L. Husbands, Blytheville, Ark., 1927; Dr. H. T. Collier, McKenzie, Tenn., 1928 (Dec'd.); Dr. V. P. Philpot, Houston, Miss., 1929; Dr. P. W. Lutterloh, Jonesboro, Ark., 1930; Dr. N. S. Walker, Dyersburg, Tenn., 1931.

MID-SOUTH

Dr. A. G. Payne, Greenville, Miss., 1932; Dr. L. H. McDaniel, Tyronza, Ark., 1933; Dr. A. B. Dancy, Jackson, Tenn., 1934 (Dec'd); Dr. P. W. Rowland, Oxford, Miss., 1935; Dr. H. King Wade, Hot Springs, Ark., 1936; Dr. C. R. Crutchfield, Nashville, Tenn., 1938; Dr. R. M. Adams, Ripley, Miss. (Dec'd); Lawrence W. Long, 1938.

PROGRAM AT SHILOH

The joint meeting of the doctors of Alcorn and Tishomingo Counties, Mississippi, and of Madison, McNairy, Hardin, Henderson, Chester, Lewis, Decatur, Lawrence, Perry and Wayne Counties, Tennessee, was held June 28, 1938, at Shiloh National Park. A picnic dinner at Rhea Spring followed the morning session. The program was as follows:

Invocation by Rev. Robert F. Wylie, Michie, Tenn.; Address of Welcome by Supt. W. W. Luckett, Shiloh National Park.

"Urinary Tract Infections," by Dr. John B. Nuckolls, Jackson, Tenn. Discussion: Dr. T. J. Stockard, Lawrenceburg, Tenn., and Dr. W. O. Baird, Henderson, Tenn.

"Fractures of the Elbow," by Dr. Stanley Hill, Corinth, Miss. Discussion: Dr. Jere L. Crook, Jackson, Tenn., and Dr. Maury McRae, Corinth, Miss.

"Amebiasis," by Dr. LeRoy B. Brackstone, Iuka, Miss. Discussion: Dr. Ernest Smith, Selmer, Tenn., and Dr. W. E. Boyce, Flatwoods, Tenn.

Committee on Programs: Dr. S. M. Herron, Jackson, Tenn., Secretary Madison County Medical Society; Dr. T. N. Humphrey, Selmer, Tenn., Secretary McNairy County Medical Society; Dr. L. C. Smith, Henderson, Tenn., Secretary Tri-County Medical Society; Dr. L. B. Brackstone, Iuka, Miss., Secretary Tishomingo Medical Society; Dr. B. Warriner, Corinth, Miss., Secretary Alcorn Medical Society; Dr. O. H. Williams, Savannah, Tenn., Secretary Five Counties Medical Society.

BOOK REVIEWS

SYNOPSIS OF THE DIAGNOSIS OF THE SURGICAL DISEASES OF THE ABDOMEN is another of the excellent series of synopses C. V. Mosby and Company, St. Louis, Mo., is publishing in a uniform format and binding. This book is written by John A. Hardy, M.D., F.A.C.S., El Paso, Texas, and is compiled to provide a concise guide to diagnosis of acute surgical diseases of the abdomen. Dr. Hardy's preliminary statement that in this country by far the greater portion of abdominal surgery is done by general practitioners is an important justification for preparing such a book—first, because of the tremendously large amount of abdominal surgery and second, because the man in general practice has limited opportunity for intensive study of abdominal diagnosis.

The finer and more abstruse points of abdominal diagnostic procedure are presented so that they might be instantly grasped and remembered. Arranged for quick, accurate and complete review of methods, all of the urgent diseases of the abdomen are taken up from every accepted standpoint. Laboratory aids, signs and symptoms that may be seen, felt or heard, and differential diagnosis are duly considered with each disease. Clear illustrations and photographs elucidate the author's description of location, signs and symptoms. A complex index further obviates the readiness of the book.

Each additional one of the series has been a boon to our everyday library, but SYNOPSIS OF THE DIAGNOSIS OF THE ACUTE SURGICAL DISEASES OF THE ABDOMEN will merit the most thorough study. This is a general practitioner's necessity.

Price: $4.50.

The machine age has no doubt increased the number of fracture cases handled by the average physician to a degree of imminent importance. No physician can afford to be unprepared to treat emergency cases involving bone injuries of all parts of the body. The most complete book on fractures was recently published by C. V. Mosby Company with extensive changes in a second edition of FRACTURES, DISLOCATIONS AND SPRAINS, by Key and Conwell. The authors have had extensive personal experience from which many of their conclusions are based, but they include the newer proved methods of fracture reductions, combining recent traumatic surgery with many standard orthopedic techniques. The book is a practical working guide for first aid, covering examination, treatment and splinting of fractures, devoting considerable attention to complications and dislocations. There are 1246 pages and 1224 illustrations. Special attention is given to fractures of the spine, of the hip and of the skull.

Besides being a stringent necessity for the surgeon as well as the man in general practice to be able to meet fracture emergencies, there is a legal significance in such cases that obligates the physician to use the best skill and knowledge in their treatment. Price: $12.50.

The fifth edition of SYMPTOMS OF VISCERAL DISEASE, by Dr. Francis Marion Pottenger, Monrovia, California, is now off the press. It is published by The C. V. Mosby Company of St. Louis and the price is five dollars. It has eighty-seven test illustrations and ten color plates. Practically every chapter has been partially or wholly rewritten. Visceral pain has been dealt with in a separate chapter. A chapter has been added to describe the vegetative centers in the brain, and fuller discussion has been given to endocrines in their relationship to bodily function. "As physiologic medicine becomes better understood, the vegetative nervous system will occupy an ever more important position in the relationship of body function. I hope this new edition may be of further aid in solving the problems of physiologic medicine," says Dr. Pottenger. Dr. Pottenger is internationally known for his work on diseases of the chest. But after many years he came to the conclusion that really a medical specialty cannot exist, that one part of the body cannot be diseased without affecting another part, each organ must be understood in its relation to other organs. This is a book that every member of the profession should read with interest and by which can no doubt be helped. Surgeons are now showing a keener interest in the subject and the new edition takes this into consideration. Chapters on visceral pain, the liver and gall bladder, and diaphragm, inervation of the heart, the urogenital tract include important and practical discussions. The book consists of 442 pages and is very concisely written as would be expected by any one who knows the author.

MID-SOUTH ESSAYISTS

The following men have accepted a place on the Mid-South program for next February according to Secretary Dr. A. F. Cooper. If they are to be the index we certainly have a fine program in the making. The Mid-South Post-Graduate Medical Assembly is serving a great purpose. No other association has a program just like it. It covers the field of medicine and surgery in a four-day course of lectures by the outstanding authorities of North America. Make your plans now to attend.

Dr. Grady C. Clay, Ophth., 384 Peachtree St., Atlanta, Ga.

Dr. Ralph M. Waters, Anesth., 1300 University Ave., Madison, Wis.

Dr. Henry B. Orton, E. N. & T., 24 Commerce St., Newark, ,N. J.

Dr. Roy R. Kracke, Path., Emory University College of Medicine, Atlanta, ,Ga.

Dr. Edgar G. Ballenger, Urol., 57 Forsyth St., Atlanta, Ga.

Dr. Norria W. Vaux, Obst., 2031 Locust St., Philadelphia, Penna.

Dr. M. P. Rucker, Obst., 116 E. Franklin St., Richmond, Va.

Dr. F. A. Coller, Surg., University Hospital, Ann Arbor, Mich.

Here is where the Mississippi State Medical Association will hold its annual session next May. It is a nice hotel, courteous and cordial, it is located in a nice town and the town on the Mississippi coast, the coming play ground of the South, may be of America. The breezes of the coast are gentle, kind, and invigorating, there is music and charm in the voice of the birds, and the people are generous and friendly. You may expect a great meeting there next spring.

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Notes and Observations On Health Subjects

Made In South Africa In 1937

By W. A. EVANS, M.D.

MALARIA IN SOUTH AFRICA

NOTES OF CONVERSATIONS HELD WITH PHYSICIANS, HEALTH OFFICERS AND OTHERS IN SOUTH AFRICA IN 1937

Malaria.—Posted in all public buildings, railroad stations and rather generally elsewhere in Congo Belge are signs which read: "The great enemy of the country is the mosquito. Have you taken your dose of quinine today? If not take it immediately. Beware of the tsetse."

The health officer for the Katauga District in Belgian Congo said they believed in the use of quinine as a prophylactic. They tried to have every body use it as such. They not only posted signs promiscuously but they promoted its use in every other way they could. They advocated three five-grain doses a day almost always in tablet form. The physician in charge of the district hospital for whites, located at Elizabethville, corroborated what the health officer for the district had told me. The white people are very much afraid of blackwater fever and in consequence they make extensive use of prophylactic quinine. This physician served several years as chief physician to the district hospital for negroes before taking charge of the hospital for whites. He says it is not easy to get negroes to take prophylactic quinine except the employees of the large copper mines and other well organized industries. The reasons for this are several. In the first place the great majority of them live in the bush and have little medical or other health service. In the second place malaria does not trouble them as it does the whites. In the third place they have little forethought. They do not plan ahead much against disease, famine or anything else. Talks with a group of Seventh Day Adventis missionaries working in this part of Africa was typical of what was told me by many missionaries in this part of the country. The missionaries take prophylactic quinine themselves and they promote its use vigorously. They have great faith in it. In some of the countries in which they work the government supplies them with free quinine to be given to whomever will take it. The government depends largely on them to the "Bush" negroes to use prophylactic quinine. In some countries where the government does not give them free quinine they sell them prophylactic duty free. This cuts the price to less than half. They complained that the Portuguese government especially in Angola charged them the full price, duty and all. The government expects them to run hospitals and dispensaries and even promote the use of prophylactic quinine. They even give them grants of money. But they charge the full tariff protected price for quinine. A physician in charge of a Lutheran mission hospital in Southern Rhodesia said they used prophylactic quinine. Malaria was their worst problem.

In most parts of the high plateau of Africa malaria is given less thought and one hears less of the prophylactic use of quinine.

The physician in charge of a hospital run by the Roan Antelope Mine located in Northern Rhodesia near the Congo border said he did not believe in prophylactic quinine and the employees of that mine did not use it. He thought it did more harm than good. The dose given did not cause a sufficient concentration of quinine in the blood to be toxic to the parasites of malaria. Furthermore, he thought it might do harm in that in time it caused malarial parasites in the blood to become quinine resistant.

All were of the opinion that malaria tends to become less of a menace to health in the country, although there were years in which the disease appeared to be more prevalent and more severe.

(In Africa there was the same variation that prevails in other parts of the world. Even lay people discuss the subject. In the Congo country lay opinion favors it. Elsewhere this is not true).

The Treatment of Ordinary Forms of Malaria—The health officer of Katanga says physicians get the best results when they begin the treatment of malarial attacks by thorough quininization following this with long continued treatment with small dosage. In treating acute malaria in Europeans (all white people are called Europeans) they use quininization as a routine procedure. They use both plasmochin and atebrine but they think of them as substitutes for quinine.

Statement of a Belgian merchant who operates a chain of stores for natives throughout the Congo country. He spends most of his time traveling by auto in every malarial country. Soon after he came from Belgium and up to two years ago he suffered a great deal from malaria. He took quinine to "break his chills."

Two years ago his physician stopped giving him quinine. Gives him atebrine and plasmochin instead. He takes a course of these remedies once or twice a year. Takes atebrine three times a day after meals. His health is now better than it ever was before—that is since he came to the country. If his stomach rebels he uses plasmochin compound.

Several physicians told me they used quinine as a routine in the treatment of acute ordinary malaria but they gave plasmochin or atebrine to certain cases.

The impression I got was that plasmochin and atebrine were more used than in this country. Atebrin jaundice is of no consequence. One physician gave the following as his method of treating severe acute ordinary malaria.

Giving quinine by mouth in tablet or pill form does little good. Tablets and pills dissolve slowly or not at all. The principal reason for not using quinine by mouth is the nausea almost always present. A nauseated patient will not absorb quinine even if he fails to vomit it. He gives soluble quinine intravenously for two days. He gives it in a vein because given there it caused no abscesses and is not very painful. Given into the tissues it may result in both of these. Intravenous injection may cause sclerosis of the vein but practically this is not of much consequence. By the end of two days the nausea and vomiting has stopped and quinine by mouth can be given with good results. He gives 15 grains a day by mouth for three days, starting with the third day of treatment. After that he gives ten grains daily by mouth for the remainder of the week. They do not use large doses of calomel or other purgatives. To do so increases the nausea. They empty the bowels by enemas and by simple, mild pleasant laxatives. They get 100 per cent of cures in all cases who follow this treatment. Certain cases are treated with atebrine and others with plasmochin but quinine is the routine remedy.

Blackwater fever.—(This disease is generally called malaria hematuria in Mississippi). This form of malaria is more prevalent in parts of Africa than it ever was in Mississippi. The people generally know about it and have opinions as to how to treat it. They know the symptoms and recognize the disease when it develops. Nearly every white man in the highly malarial regions has had it one or more times. The opinion is general among physicians and laity that quinine should not be depended on in the treatment of the disease. Most of them think quinine is a contributing cause in the disease. Some physicians use it in small doses in cases of blackwater that have some unusual symptoms but most of them hold that the hemolysis has destroyed the malaria parasites in the blood and therefore there is no need for quinine. (The bitter controversy among physicians in the United States as to whether quinine should be used in the treatment of hematuria which prevailed twenty-five to fifty years ago either did not have a counter part in Africa or else it has been forgotten).

The physician in charge of the hospital for whites in Elizabethville, Belgian Congo, says he gives no quinine in the treatment of blackwater fever. He treats such cases with warm packs, warm fomentations, warm baths. Gives salines by injections. In his very extensive experience in charge of a hospital for blacks he saw only three cases of blackwater in negroes; all recovered. He has seen whites develop blackwater while taking prophylactic quinine. Dr. Steyn of the Lutheran mission, said: "We do not use quinine in the treatment of blackwater fever. The negroes are nearly immune to malaria and especially blackwater." They give atebrine to some cases of blackwater. Does not give ordinary malaria treatment to cases of blackwater because the "pathology is completed."

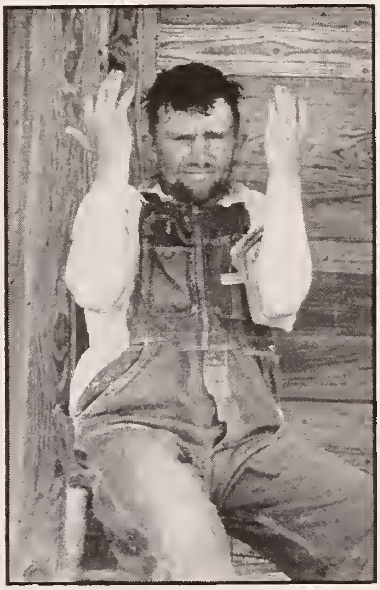
Other physicians said they might give atebrine or plasmochin to cases of blackwater if they found parasites in the blood otherwise they would not. A merchant said he had to decide between two physicians who were once attending a case of blackwater in a member of his family, one did not advise quinine, the other did. He said he sided with the man who advised quinine because the patient had some fever and the doctor thought where fever was present quinine was indicated. That seemed reasonable to the man. The patient got well. A merchant who traveled constantly by machine told me his experience with blackwater. He had it several times but always had medical attention and recovered. Quinine was not used. He was once on a business trip far away from any physician or any medical facilities wnen his traveling companion developed blackwater. This gentleman consulted a native herb doctor. The herb doctor got some leaves from a tree and made a tea of them. He had the patient drink large quantities of this tea. Tea from the leaves of this tree enjoy a great reputation among natives as a cure.

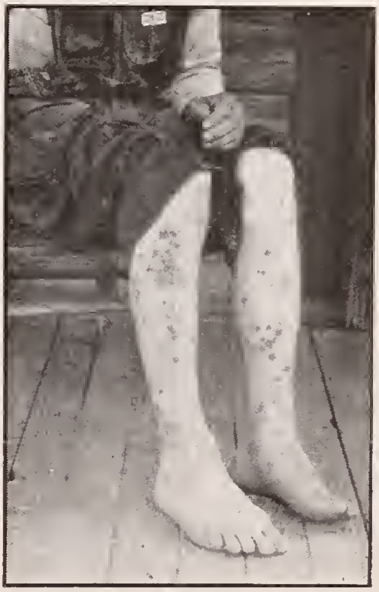
Chronic Malaria or Malarial Cachexia.—While the negroes have blackwater only rarely and generally recover and while they do not suffer much from attacks of acute malaria they are quite subject to chronic malaria, or malaria cachexia. They may not have any symptoms, where they do have symptoms they are typical. Direct treatment of chronic malaria is generally futile. It is difficult to get the bush negroes to take any treatment or to persist in any treatment which they have been persuaded to begin. The advantage of indirect treatment are stressed but they cannot be secured in many locations. The physicians to the large industries located in the Congo and in Rhodesia think that supplying the natives with good food and good home surroundings has done more to lessen the prevalence of malaria than has the use of antimalarial drugs. Removing the laborer's family with him from the bush to a mine village and providing him with a reasonably good hut and a small garden patch, seeing that he gets wholesome food, feeding his children in school and renewing his labor contract several times so as to keep him away from the bush for several years have materially lessened the prevalence of malaria cachexia. The malarial tonics used generally contain iron and arsenic.

Waves of Malaria.—In Africa one hears not infrequently of "malaria years" and other years in which the disease is infrequent. In these malaria years the disease is apt to be severe and blackwater is frequently encountered.

They do not know what cosmic or other influence makes one year a malaria year and another a lean fever year. A wave rolls up and then rolls away without adequate explanation. A considerable proportion of the medical profession are of British antecedents, have been educated in Great Britian and read British journals. British physicians working in British colonies write so much of epidemics of malaria encountered especially in India that one would expect South African physicians to record similar experinces. However, that is only a part of the explanation of malaria waves as told by African physicians. Such waves and such recessions do occur.

MR. U. L. HOOD
OF PRENTISS COUNTY





The above case was diagnosed by Dr. Gray of the State Health Department as a typical case of smallpox a few days ago. The picture was made at quite a distance and does not show the lesions as they really are. A number of cases have been reported in Prentiss county, some very mild and a few very severe.

THE MISSISSIPPI STATE BOARD OF HEALTH MEDICAL LIBRARY

The establishment of a medical library in the State Board of Health is a significant advance in the medical education facilities of the state. The physicians and members of allied professions who were long handicapped because of the lack of medical library facilities in the state are finding this new library a source of genuine help in working out their problems and in meeting their reference needs. The rapid advances in medical knowledge and the growth of current literature make the library an essential unit in keeping the profession informed on new developments in their respective fields. Diligent and intelligent use of it will help protect against avoidable mistakes, waste, and duplication of effort. Many outstanding medical achievements have come as a result of the stimulating influence of the recorded experience of others; whereas those who endeavor to work with little or no reference to current books and journals are likely to suffer serious limitations and disappointments.

The State Board of Health Library collection numbers over five thousand volumes, included in which are complete series of bound periodicals. To obtain the maximum benefit of the periodical collection, the important indexes have been added; namely the QUARTERLY CUMULATIVE INDEX MEDICUS and the INDEX-CATALOGUE OF THE ARMY MEDICAL LIBRARY. With the aid of these tools one can determine with little effort all that has been written of importance on any given subject. The wealth of references in these series have provided the medical research worker with a most extensive and comprehensive reference index to the medical literature of the world. The completeness of periodical files determines in large measure the usefulness of a general medical library and for this reason the State Board of Health is very anxious to obtain the back numbers of important periodicals which it does not now have. Physicians and others having an accumulation of journals and books stored away may put them back into service by placing them in the State Board of Health Medical Library. Miss Louise Williams, librarian, will welcome communications with regard to donations and will be glad to arrange for transportation costs on needed items.

View of reading room, including section of periodical shelving, Mississippi State Board of Health Medical Library.

Licensed physicians, dentists, registered nurses, and public health workers may borrow material from the State Board of Health Medical Library. Most material is loaned for a two weeks' period with the privilege of extension unless the material is needed by others. The profession is invited to make free use of the library's spacious reading room and to consult the books and periodicals directly from the shelves. Equipped with modern steel shelving and comfortable reading room facilities, the library opens new channels for broadening medical knowledge and for advancing the public welfare generally.

The State Board of Health Medical Library receives currently the following periodicals, and in addition has substantial files on many other important journals:

American Journal of Hygiene
American Journal of Clinical Pathology
American Journal of Digestive Diseases and Nutrition
American Journal of Diseases of Chilrden
American Journal of Nursing
American Journal of the Medical Sciences
American Journal of Obstetrics and Gynecology
American Journal of Public Health
American Journal of Syphilis, Gonorrhea and Venereal Disease
American Journal of Tropical Medicine
American Review of Tuberculosis
Annals of Internal Medicine
Archives of Dermatology and Syphilology
Archives of Internal Medicine
Archives of Pathology
Bulletin of the American Society for the Control of Cancer
Bulletin of the Health Organization, League of Nations
Bulletin of Hygiene
Bulletin of the Los Angeles Co. Medical

View of open stacks and reading room of Mississippi State Board of Health Medical Library.

Association

California and Western Medicine

Canadian Public Health Journal

The Child

Child Study

Clinical Excerpts

Current Medical Digest

Dental Survey

Digest of Treatment

The Diplomat

Engineering Abstracts (P. H.)

Federation Bulletin

Fulton Co. Medical Society Bulletin (Atlanta, Ga.)

Health and Empire (Great Britian)

Health Officer

Hygeia

Illinois Medical Journal

Jackson County Medical Journal (Kansas City)

Journal of the American Dental Association and Dental Cosmos

Journal of the American Medical Association

Journal of the Arkansas State Medical Society (Ft. Smith)

Journal of the Association of Medical Colleges

Journal of Bacteriology

Journal of the Connecticut State Medical Society

Journal of Experimental Medicine

Journal of the Florida Medical Association (Jacksonville)

Journal of Home Economics

Journal of Health and Physical Education

Journal of Immunology

Journal of Industrial Hygiene & Toxicology

Journal of Infectious Diseases

Journal of the Iowa State Medical Society (Des Moines)

Journal of the Kansas Medical Society

Journal of Laboratory and Clinical Medicine

Journal of the Medical Association of Alabama (Montgomery)

Journal of the Missouri State Medical Association (St. Louis)

Journal of the Oklahoma State Medical Association

Journal of Social Hygiene

Kentucky Medical Journal

Lancet

Maine Medical Journal (Portland)

Medical Clinics of North America

Medical Library Association Bulletin

Medical World

Mental Hygiene

Milbank Memorial Quarterly

The Mississippi Doctor

Municipal Sanitation

New England Journal of Medicine

New Orleans Medical and Surgical Journal

Nutrition and Dental Health

Ohio State Medical Journal (Columbus)

Proc. of the Conference of State and Prov. Health Authorities of N. A.

Public Health Nursing

Public Health Reports

Puerto Rico Journal of Public Health and Tropical Medicine

QUARTERLY CUMULATIVE INDEX MEDICUS

Review of Dentistry for Children

Science News Letter

Sight-Saving Review Quarterly

Southern Hospital

Southern Medical Journal

Survey Graphic

Survey, Journal of Social Work

Trained Nurse and Hospital Review

Tropical Diseases Bulletin

Urologic and Cutaneous Review

Venereal Disease Information

Waterworks and Sewerage

(Misc. periodicals of state, county, and municipal health departments).

SOME RECENT BOOK ADDITIONS

Adams: *Your Teeth and Their Care.* (1932)

American Foundation: *American Medicine.* 2 vols. (1937)

A. M. A.: *Medico-Legal Cases,* 1931-1935. (1936)

Balfour & Eusterman: *The Stomach and Duodenum.* (1935)

Bauer & Hull: *Health Education and the Public.* (1937)

Becker: *Ten Million Americans Have It.* (Syphilis). (1937)

Beckman: *Treatment in General Practice.* (1934)

Berens: *The Eye and Its Diseases.* (1936)

Blumgarten: *Textbook of Materia Medica.* (1937)

Bogert & Porter: *Dietetics Simplified.* (1937)

Bower & Plant: *Communicable Diseases for Nurses.* (1935)

Chandler: *An Introduction to Human Parasitology.* (1936)

Christopher: *Minor Surgery.* (1932)

Commonwealth Fund: *Snow on Cholera.* (1936)

Crothers: *A Pediatrician in Search of Mental Hygiene.* (1937)

Craig: *Amebiasis and Amebic Dysentery.* (1934)

Cunningham: *Family Behavior.* (1936)

Darlington: 1937 *Yearbook of Dentistry.* (1938)

DeLee & Carmon: *Obstetrics for Nurses.* (1937)

Denison & Eklund: *Eye, Ear, Nose and*

Throat Nursing. (1937)

Furnas: *Men, Bread and Destiny.* (1937)

Garrison: *History of Medicine.* (1929)

Gesell: *Feeding Behavior of Infants.* (1937)

Gleason: *Diseases of the Nose, Throat and Ear.* (1936)

Haggard: *Surgery, the Queen of the Arts.* (1935)

Hansel: *Allergy of the Nose and Paranasal Sinuses.* (1936)

Hart: *An Introduction to the Social Studies.* (1937)

Hinman: *Principles and Practice of Urology.* (1935)

Jordan: *Textbook of General Bacteriology.* (1935)

Keller: *Textbook of Surgical Nursing* (1936)

Long & Goldberg: *Handbook of Social Hygiene.* (1938)

Lord & Heffron: *Pneumonia and Serum Therapy.* (1938)

Levine: *Clinical Heart Disease.* (1936)

Levinson & McFate: *Clinical Laboratory Diagnosis.* (1937)

Mustard: *Rural Health Practice.* (1936)

Osgood: *Atlas of Hematology.* (1937)

Osler: *Principles and Practice of Medicine.* (12th ed., 1935)

Parran: *Shadow on the Land.* (1937)

Plant: *Personality and the Cultural Pattern.* (1937)

Rood: *Tuberculosis Education.* (1936)

Rosenau: *Preventive Medicine and Hygiene.* (1935).

Sadler: *Theory and Practice of Psychiatry.* (1936)

Stevens & Ambler: *Medical Diseases for Nurses.* (1937)

Stimson: *Common Contagious Diseases.* (1936)

Stokes: *Modern Clinical Syphilology.* (1934)

Stone: *Bright's Disease and Arterial Hypertension.* (1936)

Salzmann: *Principles and Practice of Public Health Dentistry.* '37

Schumann: *Textbook of Obstetrics.* (1936)

Topley & Wilson: *Principles of Bacteriology and Immunity* (1936)

White: *The Biology of Pneumococcus.* (1938)

Wiprud: *The Business Side of Medical Practice.* (1937)

Boyd: *An Introduction to Medical Science.* (1937)

Nelson & Crain: *Syphilis, Gonorrhea and the Public Health* (1938)

Schamberg & Wirght: *Treatment of Syphilis* (1938)

Davis: J. B. Murphy—*Stormy Petrel of Surgery.* (1938)

Bloom, Charles J.: *The Care and Feeding of Babies in Warm Climates*

Olmsted, James: *Claude Bernard*

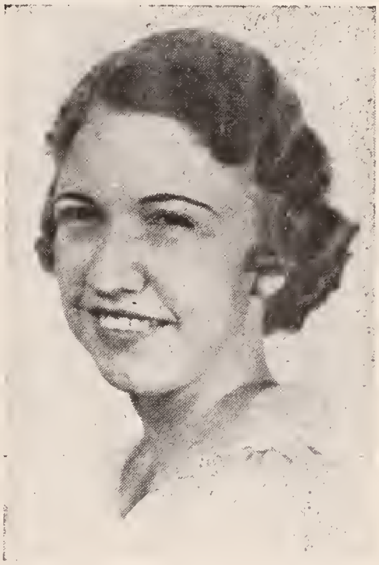
N. Y. Academy of Medicine: *Milestones in Medicine* (1938)

Ryan: *Mental Health Through Education.* (1938)

N. Y. Committee on the Study of Hospital Internships and Residences: *Internships and Residence in N. Y. C.,* 1934-1937, *Their Place In Medical Education* (1938)

American Foundation Studied in Government: *American Medicine.*

MISS LOUISE WILLIAMS
LIBRARIAN
State Board of Health Medical Library



Miss Williams has made excellent progress in developing a useful medical collection in the State Board of Health to meet the needs of the medical and dental professions of the state. Prior to organizing the library, she spent much time and study in other medical libraries with a view to devising the best possible set-up for local needs. Among the libraries visited were the following:

Tulane University School of Medicine Library, Library of Louisiana State University Medical Center; Medical Division, Library of Congress, Library of the U. S. Public Health Service, National Institute of Health Library, Army Medical Library.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

Management of Breech Presentation*

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It is of interest and importance to analyze procedures in medicine in an effort to justify changing methods, depending upon results obtained over a period of time. Therein lies the importance of statistical studies if they are made conscientiously.

I thought it might be of interest to those men present who are doing most of their obstetrical work in the home to compare a certain type of their work with a service conducted by a medical school. At Tulane Medical School the out-patient obstetrical clinic gives home delivery service to patients who have been given ante-partum care in the clinic. When the patient goes into labor the delivery team is called consisting of a graduate resident with at least a year's intensive obstetrical training, a student and a welfare nurse. A member of the staff acts as consultant. I speak particularly of this team because in Mississippi, a nursing service will soon be offered to the physicians of a county for home delivery assistance.

In this service there is someone with the patient constantly from the time she falls into labor until at least an hour after delivery unless labor ceases. A pack is furnished consisting of all essential equipment and sterile material for the delivery. The uncomplicated cases are delivered by the student under supervision, and the mildly complicated ones are delivered by the staff member in the home. The seriously complicated cases are taken to a hospital for delivery.

I have chosen the management of breech presentaton for analysis since it is one of the most worrisome types of cases in obstetrics. I consider it a complication since it occurs relatively rarely. The labor is usually longer than in vertex presentation, thus predisposing to maternal exhaustion. The difficulty encountered in the delivery of the aftercoming arms and head apparently increases the risk of fetal injury or death over that in vertex presentation. In the entire out-patient service for a period of 5 years, 1933-1937, inclusive, there were 53 or 3.9% breech deliveries in a total of 1616 deliveries.

It is often stated that external versions can be done rather consistently (Thornhill) about the 35th-36th week of pregnancy with a large percentage of these cases maintaining the corrected vertex presentation. In this series of 53 cases I could find record of only 6 attempts being made to do external version and only one of them retained the corrected position. Among these 5 unsuccessful attempts, all in multiparae, there were 2 stillbirths. One was due to birth injury. The other occurred in an undiagnosed twin pregnancy, and an attempt had been made to convert the one presenting by the breech at the pelvic brim into a vertex without success. When this breech twin was delivered it was smaller than its mate and had been dead apparently some time. Could this death have been caused by abdominal manipulation? In spite of this dubious report on external version, I believe it can be used in many instances with success, thereby overcoming a not inconsiderable complication. If the baby can be moved around easily several weeks before labor begins, I believe it is a proper procedure, particularly if there is a question of disproportion. The corrected position may sometimes be maintained by a firm abdominal binder with padding underneath running along either side of the uterine body. Occasionally the head may be partially engaged by holding it firmly at the superior strait.

In the series there were 15 primiparae and 38 multiparae. There were 39 frank breeches and 14 footling presentations. There seemed to be a greater tendency to interfere in the footling presentations than in the frank or complete breech cases since every one of the footling presentations was delivered by some type of operative procedure, whereas many of the frank breeches delivered spontaneously at least to the umbilicus. The danger as I see it in interfering too soon with a footling presentation is that the cervix may not be completely dilated and the temptation is to bring down one or both feet and complete the delivery. In some instances where this is done before dilation of the cervix is complete, difficulty is encountered in the delivery of the aftercoming head. As a matter of fact there was a fetal mortality in the footling series of 21.3% as against 28.2% in the frank breech group.

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*Read before the Section on Surgery at the Seventy-first Annual Session of the Mississippi State Medical Assiciation, Jackson, May 21, 1938.

There were only 7 or 13.3% spontaneous deliveries. In 26 or 49% of the cases there was some assistance given delivery by way of Pinard's manoeuvre, traction, or assistance in delivery of aftercoming arms and aftercoming head, and in 20 cases or 37.7% operative delivery was done, consisting of decomposition or extraction, including the use of aftercoming head forceps. One, then, needs call breech a definite complication of pregnancy. In so far as the length of labor is concerned, the primiparous labors averaged 10½ hours, while the multiparous labors averaged 7½ hours. During this time an average of slightly over one vaginal examination was done on these patients, and upon nearly one-half no examination either rectal or vaginal was done at all. Abdominal examination and type of labor are depended upon largely to determine progress. Incidentally, the barbiturates are being used at the present time in an average of 6 to 9 grain doses of sodium amytal and seconal with no untoward results in long labors such as occur in breech presentation.

Another point in the management of delivery which deserves consideration is use of episiotomy to facilitate ultimate delivery. It was found that 8 or 53.3% of the primiparae had episiotomies and 71% of these primiparae who did not have episiotomies had lacerations. In the multiparae 3 or 7.9% of 38 had episiotomies and 5 or 14.3% had lacerations. One would obviously conclude that episiotomy is required more consistently in primiparae than in multiparae, especially if one plans to deliver the head without the encumbrance of a tight perineum. Likewise, this probably shows that there are more tears than one would suspect since 71% of primiparae and 14.3% of multiparae had lacerations who did not have episiotomies. Ironing out the perineum manually may help to prevent lacerations—but in primiparous breeches probably that presenting part would never be able to dilate the perineum, as well as in vertex presentation.

The maternal morbidity was measured according to the standard set up in most hospitals to determine febrile morbidity, that is, temperature 100.2°F on two successive days, excluding the first postpartum day. Experience has taught us that temperatures less than this degree are usually not serious, although I believe that any temperature over 100°F should be accounted for and proper treatment instituted for the cause.

Morbidity is a term which should properly be applied to all complications, febrile or not, but since 40% of maternal deaths are due to infection alone, fever is the outstanding symptom of the most serious morbid condition in the postpartum period.

It was found that there were 5 patients who showed a postpartum febrile reaction of 100.2°F or more in the series of 53 breech deliveries which represents a total febrile morbidity of 9.4%. The one interesting finding in this small group of febrile patients was that 4 of the 5 fevers occurred in cases which were delivered by operative methods. This means then that the operative deliveries doubled the febrile morbidity, since the non-operative cases had a febrile reaction of 6% and the operative deliveries showed a 15% febrile reaction. Since at least 2 of the operative procedures having fever were elective breech extractions it would seem that this morbidity reaction could have been lowered by more conservative management.

Unfortunately interference was apparently done too frequently for in 8 of the 11 neonatal deaths some type of interference was done. Since there were 46 cases in which assistance to delivery was given and there were 8 deaths, this makes a gross fetal mortality of 17.3%. However, there were 2 very premature infants and 2 congenital deformities which caused death. Then the corrected mortality was 8.7% for operative deliveries.

Comparing this mortality with those which delivered spontaneously, it was found that of the 6 spontaneous deliveries there were 2 terminating in infant deaths or stillbirths. One of these was a twin, apparently dead some time before delivery; another was delivered at 6½ months, labor being induced by an acute pyelitis. Discounting these two uncontrollable deaths the fetal mortality in spontaneous deliveries was naught.

There was one case in which the infant's body had been delivered spontaneously before the clinic was notified but the head could not deliver without assistance.

It seems that one is justified in assisting the breech delivery after the buttocks have been born. Up to that time one may get into difficulties by interfering because the cervix may not be out of the way or because by manipulation the arms may be abnormally displaced. However, if one waits until the breech delivers, then these difficulties are less apt to occur. Moreover, there is usually little reason to hasten delivery before complete dilatation of the cervix. Probably the greatest number of deaths occur because of difficulty in delivering the arms and head, and if care and deliberation are taken at this point, there should be little trouble in the delivery of these parts. If the infant is rotated as the breech delivers so that the back is anterior, the arms can be delivered by simple pressure on the outer edge of the scapula which will cause them to "peel out" under the baby's body. In this series only 2 cases of extended or so-called nuchal arms were recorded, and these were in instances where there had been some manipulation in an effort to aid delivery.

As regards the aftercoming head, it is difficult not to give some assistance. Probably we are justified in lending aid if there is any delay since, at least, one death occurred because there was no one present to deliver the head. Realizing that the head has had no chance to mould, there is considerable reason to believe that the head will frequently not come through the pelvis without aid. It has been suggested by Piper that the head be guided into the pelvis by suprapubic pressure to maintain flexion and to guide it with the vaginal hand so that it will come into the pelvis in the right oblique diameter. He felt that diameter offered more room since the great majority of forecoming heads enter in that oblique, i.e. (L. O. A. and R. O. P.)

Probably most aftercoming heads can be delivered by manual means, generally by maintaining flexion with the vaginal hand in the baby's mouth or over the upper jaw combined with suprapubic pressure. However, traction over the neck is a poor procedure since it may cause tentorial tears if any amount of traction has to be used.

There is no question but that aftercoming head forceps in difficult cases will save infant lives, since one does not have to use traction or pressure in this delivery, but generally the forceps are applied only to maintain flexion of the head. If after one good manual effort the head does not easily slip into the pelvis, then forceps should be applied before irreparable damage is done to the baby.

Aftercoming head forceps were applied in 5 cases with a gross mortality of 1 or 20%. However, this baby died 5 days after delivery of a serious congenital deformity, so that forceps in the aftercoming head had a clean slate in so far as infant deaths are concerned.

In this group of cases, there were 7 complete, spontaneous deliveries, in which 2 stillbirths occurred. One was a twin dead for some time and the second 6½ months premature resulting from maternal pyelitis.

In the group of 46 delivered by partial or complete assistance, there were 8 deaths both neonatal and stillbirths, but 4 died or were stillborn as a result of prematurity or congenital deformity, leaving 4 or 10% dying as the result of birth trauma, 2, at least, of which were due to intracranial hemorrhage.

There were no maternal deaths in this series of breeches. However, breech causes only a very slightly higher maternal mortality than vertex presentation. As a matter of fact, the maternal mortality was remarkably low for the entire 1616 deliveries representing all presentations. There was an incidence of 3.7 maternal deaths per 1000 births, a figure much lower than that for the entire U. S. registration area.

Of the antepartum deaths in the breech deliveries there were 5 stillbirths, 2 of which were premature and 3 at term, making a total stillbirth mortality of 9.4% and a corrected stillbirth mortality of 5.6%.

Neonatal deaths amounted to 6, making a gross mortality of 11.3% and a corrected mortality of 3.7%. Corrections for stillbirths and neonatal deaths merely indicate the elimination of cases where the cause of death was uncontrollable. Corrections were made in this study only for prematurity and congenital deformity.

SUMMARY

The idea of having assistance for labor cases in the home probably improves the management of these cases and lowers complications. It is a great help to the physician in charge. This plan will undoubtedly be more generally used in the future.

This study seems to show that even in the home a complication such as breech presentation can be managed well, first, by maintaining a conservative attitude in so far as the delivery of the breech itself is concerned, and secondly by careful manipulation of the arms and aftercoming head. In the latter manoeuvre, forceps are indicated when any degree of difficulty is encountered in attempting to deliver the head manually, first.

Morbidity of patients was discussed and although the febrile incidence was not high in this series, less operative interference is suggested as a means of improving the present incidence.

Mortality statistics were reported. There were on maternal deaths. The stillbirth and neonatal death rate though not unusually high could probably have been lowered still further by adhering to more conservative management.

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Some Surgical Diseases That Cause Digestive Symptoms

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Before going into a discussion of surgical digestive disorders, it may be well to emphasize the fact that digestive symptoms are also frequently the result of purely medical disease not amenable to surgery, and to urge careful elimination of medical origin of the symptoms before subjecting patients to surgical treatment. Patients with non-surgical conditions, that have erroneously been subjected to surgical treatment, include some of the following: 1. Those with the digestive symptoms associated with early **pulmonary tuberculosis.** 2. Some that are suffering from the indigestion associated with the **deficiency syndrome.** Patients with deficiency disease lose weight, have a tendency to suffer anemia, often have lienteric diarrhea, low or absent gastric free hydrochloric acid, smooth tongue, and frequently complain of pain in the epigastric region and along the course of the esophagus. 3. **The psychoneurotic patient** complains of multiple symptoms, often largely digestive, they may also lose considerable weight, and are prone to have temporary periods of improvement after any sort of surgical procedure. They often complain of insomnia, often complain of vomiting immediately after meals. Aerophagia and belching are common. They too frequently show scars of abdominal operations. 4. **Migraine sufferers** usually complain of digestive symptoms, often similar to those ascribed to the precalculous stage of chronic cholecystitis. 5. **Arthritis** of the lower thoracic region of the spine may give rise to pain in the abdominal wall. **6. Syphilis** of the central nervous system, with the gastric crises of tabes, is sometimes confusing. 7. **Disease of the lungs and pleura,** particularly pneumonia, may be associated with violent upper abdominal pain and suggest surgical abdominal disease. 8. **Coronary thrombosis** and **angina pectoris,** with pain radiating to the epigastrium. 9. **Arachnidism,** with the violent abdominal pain and rigidity following the bite of the black widow spider.

Surgical Conditions. Lesions of the **esophagus,** when well advanced, are fairly easily recognized because the marked dysphagia readily leads to the location of the trouble. However, in the early stage, detection may not be so easy. Foreign body in the esophagus, diverticulum of the esophagus, and cardiospasm are readily relieved by surgical measures. Stricture, usually the result of swallowing caustic liquids, can usually be improved by dilatation. Surgical treatment of cancer of the esophagus is still not remarkably successful.

I would like to call particular attention to cardiospasm because it gives rises to such distressing symptoms and because the condition is so easily relieved. I have seen patients who had been distressingly annoyed by difficulty in swallowing for years. The regurgitation of food is embarrassing to them. They usually avoid eating away from home with other people and are prone to develop a state of mental depression. The diagnosis is very readily made by the symptoms and roentgenologic examination. Cure is easily effected by dilatation of the cardia. We let the patient gradually swallow a silk thread and then pass the Mosher pneumatic bag over the thread and under guidance of the fluoroscope. Some cases have been relieved with one dilatation. More than four or five is rarely necessary.

The patient with **diphragmatic hernia** usually complains of digestive symptoms.

Acute pancreatitis, with its violent abdominal and general symptoms, is usually associated with infectional, and often calculous, disease of the biliary tract. A stone in the region of the ampulla of Vater may obstruct the pancreatic duct and afford one explanation of the cause of acute pancreatitis, fat necrosis, and abscess. Estimation of blood amylase has been found of some value in the early diagnosis of acute pancreatitis. Amylase values rise during the early days of the disease. However, later on, even though the disease is progressing, the values will often become stationary or fall.

Treatment of **carcinoma of the stomach,** if operable, is purely surgical. On account of the mild symptoms during the early stages of gastric carcinoma, diagnosis is too often delayed until inoperable extension of the growth has occurred. This experience in the past should justify adopting the custom of making unusually thorough clinical and roentgenologic investigation of mild digestive symptoms occurring in patients of the carcinoma age.

Ulcer of the duodenum, when uncomplicated by perforation, cicatricial stenosis, or hemorrhage, has ceased to be a surgical disease. When perforation occurs, it is usually on the anterior wall. Bleeding ulcer is usually on the posterior wall. If the gastroduodenal artery is involved, the blood loss may be enormous. Hemorrhage from ulcer, occurring in young patients having blood vessels with healthy walls, will usually subside on conservative medical treatment. Bleeding ulcer in older patients with sclerotic artery responds less certainly to conservative measures and fatal hemorrhage occasionally occurs. Surgical intervention may prevent some of these fatalities. Regardless of all the abuse that gastro-enterostomy may be receiving because of its use as treatment for simple peptic ulcer, it remains the operation of choice in obstructing duodenal ulcer.

Gall bladder disease would appear to be most readily amenable to surgical treatment and has proved to be so in the majority of instances. I recently reviewed the late results of two hundred of our patients operated upon for biliary disease. The most common operation was cholecystectomy. Other operations were cholecystostomy, choledocholithotomy, cholecystgastrostomy. The survey showed that the best late results occurred in patients found to have, at operation, the most advanced pathologic conditions in the gall bladder and bile ducts. Patients reporting the poorest results were among those showing the least pathologic anatomy. This observation may be interpreted to mean that the symptomatolgy of patients with advanced disease was more often really the result of the disease and, therefore, removal of the disease resulted in symptomatic relief. On the other hand, the findings suggest that the symptoms of patients showing only slight abnormal anatomy at operation must have been less often the result of these changes and more often depended on some other unrecognized disease. In other words, good clinical results from surgical treatment of biliary disease can only be expected when the patient's symptomatology is predominantly dependent on the biliary lesion.

Regional ileitis, or regional enteritis. Most surgeons have occasionally, while doing laparotomy, observed a segment of small intestine usually close to the ileocecal junction, which showed thickened wall, was rigid, edematous, congested, and its mesentery was thickened and showed adenopathy. I encountered the first one some years ago and Dr. W. J. Mayo happened to be in the operating room at the time. He stated that the lesion was hyperplastic tuberculosis and advised against both resection and short-circuiting anastomosis. This advice was followed, the appendix removed, and the patient did well on hygienic treatment. We have observed the condition several times since. In one patient, tubercle bacilli were demonstrated in the stool, probably indicating the tuberculous nature of the intestinal lesion, because there was no evidence of pulmonary tuberculosis to account for the presence of the bacilli in the stools resulting from swallowed sputum.

Crohn[1], in 1932, described non-tuberculous granulomatous intestinal lesions very similar to those of hyperplastic tuberculosis, and designated them by the term, regional ileitis. Pemberton[2] has published observations confirming those of Crohn. Resected tissue showed no evidence of tuberculosis, and tubercle bacilli could not be demonstrated by the guinea pig inoculation method.

The symptoms of regional ileitis may be quite similar to those of chronic ulcerative colitis. In the early stages, there are often brief attacks of abdominal pain and diarrhea. However, in some patients, there are no early symptoms, and the patient when first seen may present the picture of an acute surgical abdomen, acute appendicitis, or acute intestinal obstruction. Melena is not common, but occurs occasionally. The stools sometimes contain pus and mucus. Fever, nausea, right lower abdominal pain, and tenderness are commonly present, and the diagnosis has been most often made when operating for what was supposed to be appendicitis. Roentgenography is useful in diagnosis.

The best method of treatment of regional ileitis has so far not been thoroughly agreed upon. Pemberton thinks it should be surgical and that resection should be done usually in two stages. At the first operation, if the terminal ileum is involved, ileo-colostomy is done, anastomosing a healthy portion of the ileum to the ascending colon, short-circuiting the intestinal stream around the lesion. In order more adequately to protect the diseased portion, it is better to anastomose the end of the proximal ileum to the side of the colon and close the end of the distal portion of the ileum. At the second operation, three to six or more weeks later, the diseased intestine is resected. Primary resection has been done, but results in a higher mortality.

Appendicitis. There has recently been an extensive revival of the old discussion regarding the conservative or delayed operative treatment of peritonitis of appendiceal origin. Aside from improved accessory methods available for treatment of peritonitis, such as the indwelling Jutte tube in the stomach or upper intestine and better maintenance of body fluids, nourishment and electrolytes, by the intravenous route, little new has been added. When surgical treatment of acute appendicitis is delayed until the development of actively spreading or general peritonitis, when the patient is brought to the hospital in an extremely toxic state, with resulting shock and paralytic ileus, immediate operation will almost certainly result in death. On the other hand, with the use of modern treatment of peritonitis, along with the available supportive and reconstructive measures, some of such patients will recover, usually after localized absecesses have formed and have been drained surgically. The pitiful plight of the peritonitis patient should urgently impress all concerned with the unquestionable advantage of early operation for appendicitis. There is at present some confusion regarding the application of the delayed operative treatment of peritonitis, and the treatment is being misconstrued by some to be applicable to acute appendicitis. Some have gained the idea that it is not so necessary as formerly to rush the appendicitis patient to the hospital, and that prompt removal of the violently acutely diseased appendix is not advisable because there is too much inflammation present, even though the patient's condition is good and the abdomen flat. I favor the delayed operative treatment when indicated; but would like to give a word of warning regarding the harm that may result from its misapplication. I feel that the dictum propounded by Dr. John B. Deaver, "The time to operate for appendicitis is when you make the diagnosis," though not always correct, is nearer always correct than any other one course available.

Cancer of the colon and rectum must always be ruled out when dealing with obscure abdominal disease. Change of bowel habit, increasing constipation or increased bowel frequency, blood and mucus in the stools, should cause suspicion. Carcinoma of the rectum can often be palpated by rectal examination. Proctoscopic and sigmoidoscopic examination are valuable aids in lesions somewhat higher. Colon lesions often result in palpable abdominal masses, and x-ray and fluoroscopic methods are of the greatest value in locating such lesion. Treatment of cancer of the large bowel is entirely surgical. If irradiation therapy has any value, it is probably only as a part of preoperative preparation. The tissue of carcinomatous growth of the colon is not as a rule highly anaplastic. Such growth is very slightly suceptibible to the action of the x-ray and radium and correspondingly more amenable to surgical removal because of slowness of growth and usual absence of early metastasis. For the above reasons, caution should be used in declaring carcinoma of the colon or rectum inoperable, and cases of doubtful operability should be given the benefit of the chance they may have by operation.

DISCUSSION

DR. V. B. PHILPOT (Houston): I compliment Dr. Street on his very able paper and will imit my remarks to emphasizing one or two points in it. First, the removal of slightly diseased gallbladders. It is very tempting to anyone doing surgery, when we get into an abdomen and have reasons to believe the gallbladder may be affected, but only slightly, to remove it. In such cases they are easily removed, but, as stated by the essayist, the results are not at all good. The patient will come back to us suffering with the same symptoms and an exaggeration of them. In gallbladders badly diseased the results of removal are good. It is, therefore, exceedingly important that we remove a gallbladder only when we know it is in bad condition.

The second, when we have a patient with vague symptoms of abdominal distress and every method at our command to make an accurate diagnosis has failed, we are more inclined to believe the patient has a stomach trouble than anything else. I should like to remind you of a quotation of Sir Berkeley Moynihan. In discussing these very important subjects he said, "Seventy-five per cent of presumably ulcer of the stomach is cured when the appendix is removed." So when we are undecided concerning the diagnosis, please remember the removal of the appendix will often give relief, the appendix being the trouble all the while.

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The Treatment of Ragweed Hay Fever*

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In recent years much has been written concerning the treatment of ragweed hay fever, and on reviewing the literature one finds that there are still wide differences in opinion as to the methods of treatment. The greater part of my discussion will be limited to the prophylactic treatment because it appears that more relief for the hay fever sufferer is obtained through this type of treatment.

The reduction of the susceptibility to pollen by the subcutaneous injection of an aqueous solution of pollen extract was demonstrated in 1911 by Noon. Much pollen extract has been given since that time in various forms and by various methods, and most of those treating hay fever agree with Noon's findings in that they have found that most patients show some degree of improvement after being given a reasonable number of doses of pollen extract prior to the pollination period of the plants for which they are being treated.

The greatest difference in opinion seems to be in the selection of the preseasonal or perennial methods of treatment with pollen extract. Spain and Fuchs reported a survey of 950 adult hay fever patients, 692 of whom had been treated by the preseasonal method and 258 by the perennial method. In the perennial group after one season of preseasonal treatment, 94.2 per cent were appreciably relieved. Of the preseasonal cases 73.4 per cent were appreciably relieved. The treatment in the preseasonal group was started about three months before the season. The results mentioned would tend to indicate that better results are obtained by the use of the perennial method. One should keep in mind that many of the cases included in the preseasonal list were given only one season's treatment and that only a small percentage of patients obtain any appreciable degree of relief from only one season's treatment. Those cases in the perennial group all received at least one year of preseasonal treatment.

Clarke and Leopold reported a series of 612 cases of ragweed hay fever treated for one or more seasons between 1921 and 1936 and who had received at least eight doses before July fifteenth. They conclude that prophylactic or preseasonal ragweed treatment will yield better results: (1) in males; (2) in younger persons, particularly below twenty years of age; (3) in private practice; (4) in those with weak skin reactions: (5) in those who have had constitutional reactions; (6) in those without asthma; (7) with low maximum doses, less than 800 Cooke units (0.015 mg. total N.); (8) when pollen injections are omitted during the season, although a few do better with coseasonal doses; (9) when other allergens are discovered and appropriately treated. Their observation was that perennial treatment was less effective than preseasonal, although some patients did better on the perennial method.

Waldbott and Ascher reported a series of 397 cases of all hay fever treated during the 1936 season. They observed that those receiving high final doses of ragweed extract obtained more relief than those receiving low final doses. They found that a maximum dose of 30,000 pollen units of combined ragweed pollen gave more relief from symptoms and that higher doses were not indicated. The more sensitive the patient, the lower the final doses was found to be the rule that worked best. Feinberg has found that the size of the dose should depend more on the local response than on the actual amount of pollen.

In regard to the oral administration of ragweed pollen extract, Feinberg stated in a paper to be published that he and Bernstein showed that in a series of ragweed cases practically no beneficial results were obtained by oral ragweed therapy in spite of the fact that sufficient material was administered to produce marked gastrointestinal symptoms in several of the patients.

In the preseasonal method of treatment it is well to keep in mind the importance of beginning early enough to build the dose of pollen extract up to the desired amount prior to the pollination period of ragweed. In my experience I find from two and one-half to three months adequate. Many patients fail to keep their appointments while others react so greatly that the same size dose must be repeated or a smaller dose given at the next treatment. All of this consumes time so it is best to begin not later than May fifteenth.

One very important factor in the treatment of ragweed hay fever that should be constantly kept in mind is the removal of all other things to which the patient is sensitive. It is quite rare to find a person sensitive to ragweed pollen alone. When other contributory allergens or "synergens" are discovered in the process of testing, these "secondary" allergens must be considered and either removed from contact with the person, or if present in considerable amounts and cannot be removed, must be rendered less harmful by desensitizing the person with an extract prepared from them. Such "secondary" allergens are usually found to be orris root, feathers, house dust, domestic animals and insect powder. The treatment for these allergens is usually perennial in type.

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*Read before the Section on Medicine at the Seventy-first Annual Session of the Mississippi State Medical Association, Jackson, April 20, 1938.

Many persons in addition to being sensitive to ragweed and other pollens are found to be sensitive to certain foods. They tell me that they are able to eat these foods at all other seasons of the year except the ragweed season and that when these foods are taken frequently or in large quantities during the hay fever season their hay fever symptoms are exaggerated. The complete elimination of these foods during the ragweed season is quite an important factor in treatment and is called to your attention because of that fact.

The following table showing the study of a series of fifty-one cases of ragweed hay fever treated over the last seven years shows many interesting points. The cases were taken in their respective order from my files and were not selected.

	No. of Cases	Slight or no Improvement	Moderate Improvement	Greatly Improved	Almost Completely Relieved
Preseasonal Treatment					
1 Year	16	3	8	5	0
Over 1 Year	25	2	4	11	8
Perennial Treatment					
1 Year	3	1	1	0	1
Over 1 Year	7	1	3	0	3
Males	21	1	4	7	9
Females	30	6	12	9	3
Under 25	24	4	4	10	6
Over 25	27	3	12	6	6
Weak Skin Reactions	23	4	7	7	5
Strong Skin Reactions	28	3	9	9	7
Skin Reactions To:					
Ragweed and Other Pollens	51	7	16	16	12
Ragweed & Feathers	27	5	11	7	[illegible]
Ragweed & Animal Dander	25	7	11	4	[illegible]
Ragweed & Orris Root	14	4	4	3	3
Ragweed & House Dust	19	2	7	6	4
Ragweed & Foods	19	3	6	7	3
With Asthmatic Symptoms	27	4	9	7	7
No Asthmatic Symptoms	24	3	7	9	5
Total Number of Cases	51				

Twenty-three of the twenty-five, or 92 per cent, persons taking preseasonal treatment over one year were appreciably improved. Only 51 per cent of those taking preseasonal treatment under one year were relieved to any extent. In the cases treated by the perennial method under one year only 66 per cent obtained any relief, while 85 per cent of those treated over one year were relieved appreciably. Males appeared to obtain a greater degree of benefit than females while age seemed to have little to do with results obtained from treatment. The strength of skin reactions failed to determine the results as it has in some allergists' cases. The greatest degree of improvement was noted in the cases sensitive to pollens only. Those sensitive to many allergens in addition to ragweed and other pollens obtained a high per cent of improvement but required much more care and treatment. Even after two or three seasons' treatment many persons do not build up sufficient antibodies to protect them completely. In this group the administration of the pollen extract intradermally using a 1 to 1000 dilution has been found to prove beneficial in further reducing the severity of symptoms.

Many of those who suffer from ragweed hay fever prefer to visit some resort area that is relatively free from ragweed pollen during the season rather than take pollen extract treatment. In order that you may obtain information concerning the relative value of the various areas of the United States, you will be shown a slide which the author had made, through the courtesy of O. C. Durham, from a map he had prepared showing the pollen index of various localities.

When concerning the State of Mississippi, it is interesting to note that the average number of hay fever days per season on the gulf coast is 4, in the central zone 23, and in the extreme northern part 35.

In conclusion, may I again emphasize the importance of the prophylactic treatment and when this form of treatment is selected to begin the treatment early enough to reach adequate dosage prior to the pollination period of ragweed.

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Deficiency Manifestations of Gastro-Intestinal Diseases*

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At the present time nothing is more fascinating in the field of medicine than the study of vitamins. For many of us there is the inspiration that we may actually have something tangible with which to combat many different diseases. At present, despite much confusion, there is little doubt that we are entering one of the greater periods in medicine. You, in the South, are especially alert to the problems of pellagra and sprue. In the North, however, pellagra usually is secondary to lesions of the gastro-intestinal tract or to chronic alcoholism. Observation and treatment of the latter type of case have given us much knowledge of vitamin B deficiency. No longer do we use the term "alcoholic neuritis."

Among patients who have gastro-intestinal complaints, a number complain of exhaustion, nervousness, and many bizarre dyspeptic symptoms. Also, they may speak of cramps in the legs, a sore red tongue, tingling of the extremities, and, possibly, some edema of the ankles. Often, their disability dates from a period of severe infection, such as the "flu," or it follows pregnancy. Admittedly, many of these patients are endowed with an inadequate constitution which, in turn, may be further weakened in their struggle for existence by a fuel, or diet inferior in quality, if not in quantity. Idiosyncrasies, weird notions regarding food gleaned from popular lectures or literature, and, unfortunately, unscientific diets prescribed by physicians are met with too frequently. Fixed diets, which many people follow scrupulously, are seldom wise; after certain items have been deleted from the diet, the patient usually deletes others, without proper substitution. He then may be compared with an automobile operating on cheap gas. To quote Wilbur and Snell: "It must be remembered that an abnormal diet is not the only factor in the development of a deficiency state. Other factors exist such as increased vitamin requirement during periods of rapid growth and increased metabolism, in pregnancy, or in infectious or toxic states, and altered metabolism with respect to a particular vitamin."

It is difficult to orient one's self in the field of vitamin deficiencies. What may we rightly consider as a deficiency state among individuals whose health is below par? What is the daily requirement of the body for vitamins? What products and what dosage should we use? Search of the literature with its astounding array of clinical and experimental data, followed, in turn, by the barrage of the detail men from drug companies leave one in a most bewildered state.

In an effort to obtain a practical, clinical approach to this problem, I shall present cases which illustrate definite states of deficiency that are associated with actual lesions of the intestinal tract and then I shall present a group of patients who have early or subclinical manifestations of many of the symptoms that were associated with the first group of patients. Several reports of this first group have been discussed by different workers. Strauss, in 1934, and Wilbur and Snell, in 1937, at the American Gastro-Enterological Association presented papers on deficiency states in various gastro-intestinal conditions.

Discussion of Cases of Vitamin Deficiency

In the treatment of a patient who has ulcerative disease of the colon, such as ulcerative colitis, it still borders on rank heresy to suggest that the patient may eat anything and everything that does not definitely increase the diarrhea. So well-trained are many patients in the orthodoxy of diet, that they and their doctors are horrified at the thought that fried foods, a bit of seasoning, unstrained vegetables, and even some fresh fruits and vegetables may not be a quick form of suicide. Such a case is as follows:

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*Read before the Section on Medicine at the Seventy-First Annual Session of the Mississippi State Medical Association, Jackson, April 20, 1938.

Case 1. A man, aged twenty-six years, had suffered from ulcerative colitis for fifteen months. During the first acute spell, he had eaten little other than tea and toast but, finally, he returned to a general diet. A relapse occurred, shortly after which he ate a bland diet containing no meat, and all this time he was having eight to fifteen stools each day. Finally, appendicostomy was performed. Following this, he ate chiefly tea, broth, milk, eggs, and pudding. His weight had decreased from 148 to 92 pounds. On admission, he was pale and weak, his skin was scaly, his tongue was red and smooth, his ankles were edematous and, even more serious than the diarrhea, it seemed to him, was the severe pain and burning of his feet so that he scarcely could stand or allow the bedclothes to touch him.

In addition to the characteristic findings of chronic ulcerative colitis involving the entire colon, he had hypochromic anemia. The concentration of hemoglobin was 9.5 gm. per 100 c.c. of blood and erythrocytes numbered 2,900,000 per cubic millimeter of blood. The appendicostomy tube was removed and a generous diet ordered. This was supplemented by vitamin B orally and by liver extract parenterally. In addition, he received chronic ulcerative colitis vaccine and two transfusions of blood. His general state improved much faster than did the peripheral neuritis. He remained at The Mayo Clinic nearly two months and, when seen again ten months later, he had gained 30 pounds and was able to walk normally although pain in the right foot was still present.

This case illustrates the depletion and deficiency accompanying a serious disease. By no means is it easy to make a patient who has ulcerative colitis eat as much as he should and it may be necessary to supplement the diet with vitamins. I am not presuming that adequate food, vitamins, and minerals will cure ulcerative colitis; but how futile it is to hope to halt such a disease when the intake of these various elements is far below minimal requirements! In behalf of patients such as this one, there has long been the cry: "If only something could be done to alter or improve the soil so that this terrible process cannot continue." Certainly, nowadays, we can at least do much by giving the body a chance to rebuild its resistance.

There is another type of ulcerative disease of the colon which really is not ulcerative colitis. On proctoscopic examination, a diffuse inflammatory process is seen which is difficult to describe, but which differs distinctly from that of ulcerative colitis. Roentgenologic examination with use of the barium enema discloses a peculiar patchy distribution of an inflammatory process, quite different from ulcerative colitis. The following two cases are characteristic.

Case 2. A man, aged sixty-nine years, came to the clinic on April 9, 1937. He complained of loss of weight and strength, numbness of the feet, unsteady gait, and diarrhea. These symptoms had been steadily progressive during the preceding eight months. His diet had consisted of milk, eggs, bread, and very little meat and vegetables. He was having four to eight watery stools daily; the stools contained some blood and mucus. Physical examination revealed a thin, gaunt individual whose weight had decreased from 165 to 133 pounds. His skin was dry and there were many regions of keratosis but definite dermatitis of the type usually associated with pellagra was not present. The tongue was red and dry. There was slight edema of the ankles. He was slow and dull mentally as well as physically. Proctoscopic examination revealed evidence of many peculiar ulcerated regions. Roentgenologic examination with use of the barium enema disclosed "peculiar mucosal changes throughout the colon." Examination of the stool gave no evidence of parasites or ova. There was an absence of free hydrochloric acid as determined by analysis of gastric contents after the Ewald meal. Roentgenologic examination of the stomach gave negative results. He was placed on a diet high in content of vitamin and protein, supplemented with vitamin B orally and with liver extract parenterally. He responded sufficiently well to be dismissed on the seventeenth day. He was seen again in eight weeks. His appearance and actions were less abnormal and he had gained twelve pounds. He did not have diarrhea. Proctoscopic examination gave evidence of normal rectal mucosa. He was advised to adhere carefully to a full, generous diet.

Case 3. A woman, aged sixty-six years, was brought directly to the clinic on April 17, 1937. She gave a history of acute diarrhea which had been present for one week during which time she had passed fifteen stools a day. But in this brief time, she had lost 10 pounds and was markedly depleted. She was none too alert mentally. Later, it was learned that, for years, she had been thrifty in all ways, including her diet. The latter had consisted chiefly of tea, cereal, bread and some vegetables. Rarely did she have meat, citrus fruits, and milk. Prior to this illness, she had "felt tired all winter." On physical examination, the smooth, dry, red tongue was a striking feature. Other than this there was nothing of moment. Examination of the stool for parasites, as well as cultures for Bacillus dysenteriae and Bargen's streptococcus gave negative results. On proctoscopic examination, a diffuse indeterminate type of proctitis was observed. Roentgenologic examination with use of a barium enema gave evidence of a severe type of colitis which was most marked in portions of the transverse and descending colon. On the fifth day after admission, acute parotitis added to her suffering. She remained in the hospital eighteen days, during which time she was fed as generously as possible and her diet was supplemented with vitamins B and C, as well as liver extract parenterally. At this time, the concentration of hemoglobin was 14.5 gm. per 100 c.c. of blood and the erythrocytes numbered 3,540,000 per cubic millimeter of blood. Unfortunately, smears of the blood were not examined until she returned in November, 1937. At this visit, she said that she was having no diarrhea but was not very strong. Proctoscopic and roentgenologic examinations gave evidence of remarkable improvement in the bowel but it was not entirely normal, although there were no features of true ulcerative colitis present. The concentration of hemoglobin was found to be 11 gm. per 100 c.c. of blood and the erythrocytes numbered 2,950,000 per cubic millimeter of blood. Examination of blood smears revealed evidence of macrocytic hyperchromic anemia similar to pernicious anemia. She was still remiss in attention to her diet and she promised to do better. In addition, a systematic course of injections of liver extract was prescribed. Examination of the blood four weeks later gave normal findings.

These patients had neither sprue nor pernicious anemia, for I do not think the ulceration of the colon is associated with either disease. There is the background of long continued malnutrition to which may be added acute intercurrent infection, such as occurred in the second case and, in that instance, it developed into a serious condition. Two cases should not be the basis for generalization, but the combination of faulty intake of food, later faulty absorption, and, finally, development of a definite syndrome of deficiency, all of which responded to good food, vitamins, and liver extract would suggest that vitamin deficiency may contribute, in some cases, to development of a certain type of ulcerative disease of the colon.

Have we reason to feel that deficiency may influence or be the result of inflammatory changes in the duodenum and jejunum? The following case would suggest this:

Case 4. A woman, aged thirty-two years, registered at the clinic in October, 1936. She complained of spells of diarrhea for six years. The attacks occurred each fall and lasted four to six weeks. Following the spell in 1935, she did not recover completely. Her occupation was that of head waitress at a summer resort and she attributed her attacks to fatigue owing to the busy summer season. She endeavored to work during the summer of 1936 but her stomach became upset and she found it difficult to eat little other than hot milk and orange juice. She spoke of having been anemic for years and, also, of avoiding many foods for fear of bringing on diarrhea. Her weight was 18 pounds below normal. Her tongue was red, smooth, and dry. Study of the blood disclosed evidence of macrocytic anemia. On gastric analysis, the total acidity was 62 and free hydrochloric acid, 52. Examinations of the stool, proctoscopic examination, and roentgenologic examination with use of a barium enema gave negative results. Roentgenologic study of the stomach gave negative results but evidence of diffuse duodenitis and jejunitis was obtained. She had marked infection of the teeth. A liberal diet, including yeast, was instituted and, in addition, iron and tincture of iodine were administered. She began to gain in the two weeks she was here. On her return in May, 1937, she was greatly improved but was still aware that her strength was not normal. The infected teeth had been removed and, with each series of extractions, there had been an increase in symptoms referable to the stomach and bowel. Roentgenologic examination of the stomach now disclosed a deformity of the duodenum characteristic of duodenal ulcer but duodenitis and jejunitis, noted previously, had disappeared. She was advised to observe care but not restriction in her eating and, at Christmas, 1937, she wrote that she seemed quite well. Again, I do not presume to attribute ulceration of the upper portion of the intestine to deficiency of vitamins, nor do I minimize the probable importance of focal infection. Yet, again, this patient was not improving on a deficient diet and did gain when she was given food. Her margin of safety may be small, which will necessitate constant vigilance in her diet.

Time does not permit continuing with examples of deficiency, such as occurs in association with sprue. However, is it not remarkable to care for a patient in the late stages of sprue and see him die before your eyes and then, at necropsy, to find nothing except atrophy of the intestinal mucosa which is especially marked in the small intestine? Of course, knowledge of the cause of such atrophy, with the resulting inevitable failure of the bowel to absorb food and vitamins, is necessary in order to cure the disease. If one can see a patient who has sprue and can begin treatment before the body has reached this irreversible stage, it is usually possible to control the process effectively.

Less Distinct Types of Deficiency Conditions

In our study of a large group of patients whose chief complaint was diarrhea, we found that the conditions underlying the complaint ranged from mild to severe depletion. In none of these cases was there demonstrable disease of the intestine. The mild case is illustrated by the following:

Case 5. A man, aged thirty-two years, came to the clinic in August, 1928. He complained of severe attacks of diarrhea for the past five years. The attacks occurred each spring and lasted several weeks, during which time he lost much strength and weight. On examination, no abnormality was found. Further discussion elicited the fact that he ate small amounts of fresh meat, fruit, and vegetables. He did not care for them and was considered a "fussy eater." Emphasis was placed on a suitable and well assorted diet. The next spring he did not have diarrhea.

There is nothing very striking in this case, especially if seen in the quiescent phase. Undue importance may be laid to the inadequate diet; in any event, be it fate or food, he escaped the annual attack. The possibility of intercurrent infection is not discounted and, although we may not be able to avoid germs, possibly we may make our "soil" resistant enough so that germs will not be able to gain foothold. The following case is a good example of the severe type of "deficiency and diarrhea."

Case 6. A woman, aged thirty-nine years, was first examined at the clinic in August, 1930. At that time she complained of diarrhea; she was having four to eighteen stools each day. Naturally, she was weak and had lost weight. She had burning of the mucous membranes of the vagina and mouth. Her finger nails were split and cracked which, oddly enough, was one of her major complaints. From 1921 to 1925 she had lived chiefly on starches, fats, and pork but, for the past five years, her diet had been fairly normal. The diarrhea and other symptoms had been present for nine years. Examination of the blood disclosed that the concentration of hemoglobin (Dare) was 43 per cent, erythrocytes numbered 3,350,000, and leukocytes 5,500 in each cubic millimeter of blood. Examination of the blood smear gave evidence of moderate to marked hyperchromic anemia and the neutrophils were "toxic," grade 2 (on the basis of 1 to 4). Various gastro-intestinal studies gave negative results including gastric analysis. The total acid was 50 and free hydrochloric acid, 32. During the next three years she received a diet high in content of vitamin, calcium, vaccine prepared from organisms isolated from her stools, iodine, iron, and so forth. She improved somewhat, but was not well. In the fall of 1933, courses of liver extract and yeast were prescribed. A year later, she was in definitely better health than she had been previously and she had learned that a certain amount of yeast and frequent injections of liver were required to maintain her health; when she heeded these requirements, neither stomatitis nor diarrhea developed.

This case could be considered as an example of some features of the clinical syndrome of sprue. Until she received liver extract, her health could not be maintained. She did not have the bulky, light colored, fatty stools and there was no measurable disturbance of the metabolism of calcium. However, such signs and symptoms might have developed in time. The following case is another example:

Case 7. A woman, aged forty-one years, came to the clinic in March, 1931. Diarrhea had been present for nine months, characterized by four to ten watery, foul, brown stools each day. She had tried a liquid diet, a diet high in content of protein, and then a soft diet. Emetin, stovarsol, bismuth and parathormone are some of the drugs that had been tried prior to coming to the clinic. She was pale and weak and her weight had decreased from 115 to 97 pounds. Her tongue was red and smooth. Studies of the gastrointestinal tract showed only atony of the terminal ileum and colon. On gastric analysis, total acids were 30 and free hydrochloric acid 8. Examination and cultures of the stools gave negative results. Marked hypochromic anemia was present. Administration of a diet high in content of vitamins, calcium, iron, and yeast and transfusions of blood resulted in some improvement. When she returned in November, 1936, her condition was about the same as on her previous visit. Her teeth had been extracted in the spring of 1936. It was necessary for her to take liquids and soft foods for some weeks. In July and August of 1936, massive edema of the legs (beriberi, wet type?) had developed which disappeared fairly well after admission to the clinic. Careful re-examination gave evidence of nothing different from the findings in 1931. It was difficult to get her to eat. Concentrates of vitamins were administered as well as liver extract. Also, two transfusions of blood were given. After three weeks, little progress was made and she returned home. A recent letter indicates that she is no better than when she was at the clinic.

Underlying this picture, there is, apparently, an inability to absorb and utilize food and vitamins and, unless something intervenes, soon she will reach an irreversible state and slowly go on to death. I know of nothing more to do for her other than to continue administering massive doses of vitamins. I fear that she will not recover and necropsy, likely, will reveal nothing more than the peculiar atrophy of the intestine which occurs in association with sprue.

That an apparently chronic process, which one fears may become irreversible, can return to normal, is illustrated by the following case:

Case 8. A woman, aged thirty-one years, was first examined at the clinic in May, 1925. She gave a history of recurring attacks of diarrhea of four years' duration. She was 30 pounds underweight. Her tongue was often sore and was red. During the spells of diarrhea the stools were watery and irritating. The concentration of hemoglobin (Dare) was 48 per cent and erythrocytes numbered 3,370,000 in each cubic millimeter of blood. Examination of the stool and roentgenologic and proctoscopic studies of the bowel gave negative results. A therapeutic trial of antiamebic medication was of no value. She was urged to eat as complete a diet as possible, especially beef and as many fresh fruits and vegetables as she could tolerate. Iodine and kaolin were prescribed but were of uncertain value and, of course, iron was administered. She continued in more or less the same state and recurrent episodes of hypochromic anemia, diarrhea, and stomatitis were experienced until 1929, a period of nine years since the onset of the disease. Her condition began to improve in 1929 and, in 1935, she was apparently normal.

Just what lies behind such a picture is an enigma. This problem may be classified as primary idiopathic hypochromic anemia which is correct from the point of view of the blood picture. But, are the phases of diarrhea and stomatitis the causes or the results? Does this represent a deficiency of iron, of vitamins, or of protein? In any event, encouragement of this patient to do all she could to maintain an adequate diet must have been of some help until, finally, the condition righted itself.

It is not difficult to narrate any number of these fascinating problems. However, those already described illustrate the various features of probable vitamin deficiency. Whether vitamin deficiency is a precipitating or a secondary factor cannot be settled fully but, in all, there seems to be no doubt concerning the tremendous importance of good "fuel." In reviewing some of the earlier cases, I am greatly impressed by the fact that we failed woefully to provide anything like the vitamin intake that now seems essential. The fact that liver seems valuable in treatment of many cases is of great interest and, probably, better results accrue in those cases in which we do not use highly concentrated products. It may not be the antianemic factor so much as the B_2G complex which is lost from the highly concentrated extract. The potency of liver extracts is brought out in Ruffin and Smith's study of pellagra in which they found Valentine's aqueous liver extract administered orally at the rate of 90 c.c. daily was the most effective. Likewise, Sydenstricker and Thomas showed that there is a factor in liver and in dried gastric mucosa which was more effective in treatment of pellagra than yeast. In the discussion of this latter paper, Lippincott emphasized that often there seemed to be loss of some intrinsic factor and the patient failed to improve in spite of receiving generous amounts of the intrinsic factor. Miller and Rhoads, in their studies of rats, demonstrated that liver extract administered parenterally does not contain enough of the B_2G complex to maintain normal growth. Even liver extract, when given orally is deficient in B_2G. However, nicotinic acid has been isolated from liver and seems to be successful in controlling pellagra in the case reported by Smith, Ruffin and Smith. They stressed the necessity of supplying enough B_2G, if such deficiency seems likely. McCollum pointed out that absorption of iron may be low in the presence of a low intake of vitamin C which might explain part of the syndrome of hypochromic anemia.

Let us consider what are now held to be the requirements for vitamins among human beings in good health. The growing child needs more than the adult, in proportion to height and age; the pregnant woman, especially, if nausea and vomiting are present, needs more than the woman in the nongravid state; unusual and prolonged physical stress likewise requires that vitamins be taken in amounts greater than normal. Cowgill and Eddy recently have suggested amounts as listed in table 1.

TABLE 1

REQUIREMENTS FOR VITAMINS (COWGILL and EDDY)

Vitamin	For:	COWGILL	EDDY
A	Growing children	3000 International units daily	4000 to 5000 International units daily
	Nursing mothers	9000 International units daily	
	Adults		5600 International units daily
B1	Infants	80 International units daily	
	Adults	300 (500) International units daily	500 International units daily
C	Children and Adults	200 mg. cevitamic acid daily	
D	Infants	700 International units daily	
	Adults	400 International units daily	
G		Amount not determined. International units not determined	

Baker and Wright suggest that a high intake of vitamin B_1, in treatment of syndromes associated with beriberi should be 1500 International units. Now we know that vitamin C oxidizes rather rapidly so that the juice of citrus fruits or tomatoes should not be allowed to stand uncovered for hours before being ingested. In regions where citrus fruits are not easily available, certain apples are a good source of vitamin C according to Todhunter, provided that the peel is eaten.

I was curious to know the content of vitamins and minerals of three of the standard dietary regimens: 1 the bland anticonstipation diet, 2 the ambulatory ulcer diet, and 3 the high vitamin--low residue diet. Miss Mary Foley of the Kahler School of Nursing has kindly provided the data contained in table 2.

These figures suggest that these diets are lowest in content of vitamin B and next lowest in content of vitamin C. Certainly, the patient who has diarrhea and who has, usually, both lack of appetite and increased loss of nourishment by way of the bowel, is not receiving enough of vitamins B and C. It would be necessary to consume yeast pills in such numbers that it would be preferable to use the more concentrated products which supply 150 to 1000 or more units per capsule. A capsule or pill that contains 1000 units and retails for 13 to 15 cents certainly seems more expensive than a yeast pill that costs 1 to 3 cents, but it is not more expensive per unit of vitamin contained. It would be necessary to ingest fifteen to twenty yeast pills in order to obtain the same amount of vitamin B_1 that is contained in such a capsule. It is accepted that the first sign of depletion of vitamin B_1 is loss of appetite; hence, all the more reason exists for giving an excess of vitamin B_1. Although a tablet containing 25 mg. of cevitamic acid is equivalent to about 50 c.c. of orange juice, it is unwise to rely solely on such tablets, because vitamin P, the factor related to control of hemorrhage in scurvy, is a component of the juice of citrus fruit and is not present in cevitamic acid.

TABLE 2

Content of Vitamins and Minerals in Various Diets

Diet	A*	B_1*	C	D*	G**	Calcium, mg.	Phosphorus, mg.	Iron, mg.
Ideal amounts vitamins and minerals	5,000 to 6,000	300 to 500	100 to 200 mg.	400	600 ?	.7 to 2.0	1.32	12 to 15
Diet in winter of average Fellow*** (2,500 calories)	2,800	92	180 mg.	30	376	.99	1.19	9.4
Bland anticonstipation diet (2,678 calories)	6,300	209	125 mg.	90	630	1.28	1.6	13.7
High vitamin diet with yeast and haliver oil (3,100 calories) used in treatment of ulcerative colitis	19,000	243	165 mg.	561	825	1.12	1.7	13.1
"Ambulatory" ulcer diet (2,766 calories)	6,800	129	90 mg.	161	681	1.86	1.94	12.09

* In terms of International units.
** In terms of Sherman-Bourquinn units. No fixed International units.
*** Data obtained from Fellows in The Mayo Foundation.

Careful study of the whole problem of vitamins always leads to the conclusion that the more liberal and assorted the diet, the less need there is for excitement regarding the components of the diet. It is only when the "body machine" deviates from normal, regardless of the cause, that the intake of "fuel" must be scrutinized. Since depletion may be due to more than one factor, we, as yet, know far too little to ascribe such depletion to a deficiency of any one vitamin. Utilization of additional knowledge should prove greatest in treatment in the enormous field of early or subclinical states because the full blown cases, such as sprue and beriberi are encountered but infrequently in general practice in this country. Hence, until we know more than we do now, it is justifiable to use a mixture of vitamins, certainly of vitamins B and C. So-called "shot-gun" mixtures now available are not acceptable to the Council on Pharmacy and Chemistry. This decision on their part is probably sound and on scientific grounds. My objection to such products is not that I object to the "shot-gun" idea, but rather that these products have a very low content of vitamins B and C; this makes the products expensive out of proportion to the ingredients. The diets listed above would suggest that we need pay less concern to vitamin A and, possibly, even to vitamin D but we should strive for higher intake of vitamins B and C.

Summary

The knowledge and utilization of vitamins marks the greatest recent advance in medicine although knowledge of certain deficiency states, such as scurvy and beriberi, can be traced back many years. With the identification and isolation of the different vitamins, progress in this field has been stimulated to such an extent that it is difficult for the clinician to keep pace.

Certain deficiency conditions, which occur in association with lesions of the intestine, are usually secondary to some other diseases but the importance of adequate therapy by methods of replacement is obvious. In treatment of less definite conditions not associated with any demonstrable pathology, use of high intake of vitamins seems important in obtaining a return of the patient to normal.

A few typical diets have been considered with respect to their content of vitamin. It would seem that even the so-called high vitamin diet is high only in content of vitamin A. Certainly, if we feel that vitamins B and C are valuable, we must modify or supplement the diet. If a deficiency state has developed, massive doses, over a reasonable period, should be prescribed; we have tended to use too small a dose.

Finally, a well assorted diet in the absence of disease continues to supply all essentials, as it has for the past thousands of years.

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Organized 1867

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Papers and news material for publication should be received not later than the fifth of the month preceding publication.

The editors are not responsible for statements made by any contributor.

Manuscripts and all material for publication should be addressed to the editor, P. O. Drawer 231, Vicksburg, Mississippi.

EDITORIALS

FROM THE PRESIDENT-ELECT

TO THE SECRETARIES OF THE SOCIETIES OF MISSISSIPPI:

Gentlemen:

At this time, please permit the president-elect to emphasize the great necessity of keeping the membership in the Mississippi State Medical Association at as high a level as possible.

Mere numbers mean nothing, still the fact remains that "where there is union there is strength," and if the Association is to continue to do the work it should do, it must have an increasing co-operative effort as the tasks ahead become more and more difficult.

The medical profession faces an upheaval of gigantic proportions, that awaits the constructive intelligence and heroic action of real men, and success or failure depends upon organization, and effectiveness of organization is largely determined by the forces that enter into it.

During 1937 the Association had a membership of 995, whereas in 1938 there were only 945, a decrease of slightly over 5 per cent, which may mean much or little, yet it does show an unhealthy trend in this state.

There are 1,515 doctors, of whom only 51 are negroes, in Mississippi, and every county, except one, has a medical organization or is a component part of a medical society; therefore, it is easily seen that many men can and should be recruited from the 570 doctors, who during the present year are not affiliated with organized medicine.

Several counties will increase their membership during the next twelve months, yet there are so many capable men neglecting the advantages the society offers and the society is losing the counsel they could give.

It is not necessarily the task of the secretary to bring in new members, however, many do regard this as his chief function, and because of his key-position he is the real worker in the society. Therefore, would it be asking too much to request every secretary of every medical society in Mississippi to contact, either himself or thru some committee, every doctor within his jurisdiction, and urge him to affiliate with his county society?

Of course, there may be an occasional doctor, not eligible, but be it said to the credit of the profession, there are comparatively few, who do not measure up to the qualifications that make this calling the outstanding one among civilized people.

Let it be known:

1. Organized medicine needs every doctor.
2. Every doctor needs organized medicine.
3. Doctors do better work, and receive greater rewards in a professional and business way when joined in purpose.

Success of medical union means that the doctor will carry on his work unhampered by bureaucracy.

Failure, on the contrary, seals the fate for the doctor, who

1. Will be dominated by political cliques, devoid of those fundamentals so essential to the proper administering of medical affairs.
2. Will become a "hired man," with a wage scale, not dependent upon ability and training, but rather according to the "pull" he can bring to bear on the "higher-ups."
3. Will become a "clock-puncher" doing his tour of duty, then forgetting the ideals that have characterized the Noble Art.
4. Will necessarily deteriorate in his fitness and in time become a very small cog in a machine built by politics, tuned to selfishness and operated by graft.

Sincerely yours,

Jackson,
May 26, 1938

Percy Wall
President-Elect.
Mississippi State Med. Asso.

ATTENDANCE AT SOCIETY MEETINGS

To the vast majority of doctors attendance at medical society meetings is a highway to a state of happiness and satisfaction. Such men do not have to make themselves go or be influenced by others. On the contrary, they see to it that nothing prevents their attendance because there are good things they want, which they cannot get if they are absent.

What are these rewards of attendance, these ends to which attendance is a means?

Not most important, and yet by no means unimportant, is relaxation. How refreshing it is to a man whose days are filled with the busy duties of professional life, to spend an hour or two in the company of those he knows and likes well! Many a doctor can testify to the recreation he has found in such company and to the physical and mental benefit of getting away for even a brief period from the perplexities and demands of his office and practice.

Another award of attendance is information. In conversation with his fellow members, from the reports and announcements, and from the speakers of the evening, the doctor who is present at a society meeting acquires a knowledge of medical affairs and its advance which expands his horizon, and increases his potential effectiveness.

A third regard is the wider acquaintance and better understanding of men which are consequences of the atmosphere characterizing a medical society meeting. Many a doctor has found new things to admire and respect in men he thought he knew before. By contacts with new members, visiting doctors, and other guests, he enlarges and enriches his experience.

These three rewards, relaxation, information, wider acquaintances come without much effort on the individual's part. They are practically clear profit to him.

There is another result of attendance which usually involves a further effort on the member's part. But it, too, is rewarded. It is the opportunity to share in keeping things going. Medical societies do not just happen. They are the result of the unselfish devotion of officers and committees. The member who has benefitted generously will want to do his share in carrying the responsibility. Regular attendance is a responsibility.

Finally, whether he knows it or not, the doctor who is regular in attendance is also accomplishing another end. He is doing for his fellow members what we have already noticed that they do for him. Moreover, he is encouraging and sustaining those officers and others whose efforts have set the stage for the satisfaction he has found, those without whose efforts a medical society meeting would be just another meeting.

Let's attend our society meetings!

TAKE TIME

Take time to work—it is the price of success.

Take time to think—it is the source of power.

Take time to play it is the secret of perennial youth.

Take time to read—it is the foundation of wisdom.

Take time to worship—it is the highway to reverence.

Take time to be friendly—it is the road to happiness.

Take time to love and be loved—it is the privilege of the gods.

Take time to look around—it is too short a day to be selfish.

Take time to laugh—it is the music of the soul.

Take time to play with children—it is a joy of joys.

Take time to be courteous—it is the mark of a gentleman.

TAKE TIME TO LIVE.

—BROOKLYN FELLOE

"Neglect has lost more business than competition ever will."—Robert C. Jennings.

ADDRESS OF WELCOME*

On Behalf of the Central Medical Society

Frank Hagaman, M.D., Jackson

Mr. President, Gentlemen of the Mississippi State Medical Association:

The Central Medical Society has commissioned me to extend to you a most cordial welcome.

Eighty-two years ago, in the year 1856, a small group of Mississippi physicians met for the purpose of forming a medical association, dedicated to "a livelier spirit, a better acquaintance and extended professional intercourse, and greater and more concerted action on the part of medical men."

The American Medical Association had been organized only nine years before, and since membership in this body was limited to specially elected delegates, it is conceivable that desire for representation in the national organization was a factor in bringing together the medical men of our state.

In that day of difficult communication and slow transportation, one can imagine the months that were consumed and the energy expended before the convention was an actuality. Dr. Noland, who resided at Rodney, probably spent two or three days enroute to the little village on the Pearl in Hinds county. Some probably arrived by the way of the steam cars, but the majority, of course, came in buggies and on horseback.

The month of the meeting was December and the condition of the streets of Jackson was no doubt wet and muddy. Despite these difficulties, an organization was formed. Nine delegates to the American Medical Association were chosen, and the Mississippi State Medical Association was formed, with Jackson designated as its permanent home.

Since that historic date, many events have transpired. Within a few years our nation was to be torn asunder by a Civil War; a battle fought on the outskirts of the Association's first meeting place; a carpetbagger to sit in the Governor's chair; and twice, young men have marched off to foreign wars.

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*Delivered at the Evening Session at the Seventy-first Annual Session of the Mississippi State Medical Association, Jackson, April 19, 1938.

Despite all adversities, medical science has marched on, and in those eighty-two years, progress in the medical sciences has surpassed everything accomplished prior to that date. Any attempt to enumerate the advances that have been made in the medical world during the intervening years would not be appropriate, but it may not be amiss to recall that during the lifetime of our organization, more progress has been made in the treatment of disease than in all the rest of history. And with this progress, our Association and the members of the Mississippi medical profession, have kept pace.

During the intervening years, many delightful sessions of our Association have been held in cities of all sections of the state, and the precedent set by each of these is so high that now it is indeed a difficult task to maintain so high a standard. The Arrangements Committee, under the efficient guidance of our General Chairman, Doctor Garrison, has labored diligently, however, to get the stage properly set for this, the seventy-first session of the Mississippi State Medical Association.

Under the guidance of our President, Doctor Little, we are assured of an excellent scientific program, and hope that you will enjoy the social activities that have been arranged.

We want you to know that we feel highly honored to have been chosen hosts for this year, and since the Central Medical Society likes to feel that Jackson is still the home of the Association, I want to say in conclusion, with all the meaning that the words can imply, welcome home.

CANCER MANUAL

The Executive Cancer Committee of the Iowa State Medical Society has developed and published a "Cancer Manual"—"Standards for the Diagnosis and Treatment of Cancer." It is the opinion of the committee as shown in the introduction that an effective attack upon the problem of cancer demands the inauguration of a dual educational program. The lay public must be taught the significance of the early signs of malignant disease and that "early cancer is curable," and the medical profession must be made aware of recognized procedures for early diagnosis and for adequate treatment.

With the support of the American Society for the Control of Cancer, more than 100,000 women have enlisted in the Women's Field Army. The profession must become cancer conscious; they must, in the presence of certain symptoms, think of cancer first rather than last; and they must remember that only the early diagnosis of malignancy is a clinical accomplishment.

In the small manual of 168 pages are presented the essential symptomatology, the recognized methods of diagnosis, and a survey of accepted therapeutic procedures for the more common malignant growths. In addition there is a comprehensive bibliography should the reader care to do more extensive reading in particular conditions.

The manual has been distributed to all physicians in Iowa. It would be valuable to every Mississippi physician for quick reference. It is available for $1.00 from the publisher, The Athens Press, Iowa City, Iowa.

TUBERCULOSIS SEMINAR

The second annual tuberculosis seminar of Asheville, N. C., under the auspices of the Buncombe County Medical Society will be held this year July 11 to 16, and as before will consist of an intensive practical course in diagnosis and treatment, both medical and surgical. The enrollment this year will be limited to twenty and the fee will be $10.00.

In addition to increased clinical facilities, the schedule will be arranged to afford some time for recreation.

The following will conduct the seminar: Drs. C. Hartwell Cocke, Charles De Witt Colby, Wm. Pinckney Herbert; Thos. R. Huffines, J. Walter Huston, Julian A. Moore, Paul H. Ringer, M. L Stevens, and Karl Schaffle, chairman.

The officers of the Buncombe County Medical Society are: Drs. R. A. White, President; Edward Schoenheit, Vice-President; and G. W. Kutscher, Jr., Secretary and Treasurer.

FOLLOW-UP REPLIES

Question: Do you suffer from any of the same symptoms as when here?

Answer: "Backhurt at some time."

Question: Have you gained weight? . . . Lost weight? . . . How much?

Answer: "3 P."

Question: Do you suffer from any abdominal pain?

Answer: "I have like a string pain."

Question: If so, where is pain located?

Answer: "It is in the wound place It quins."

Other pains?

Answer: "It quins like my wounds."

Question Where located?

Answer: "In my stomach."

Question: Do you still menstruate?

Answer: "No."

Question: Is it at regular intervals?

Answer: "No but I have headache."

Question: Is there any pain associated with menstruation?

Answer: "No only a headache."

Question: Do you have leukorrhea or vaginal discharge?

Answer: "very little."

Question: If so, what is its color?

Answer: "White."

Question: How much?

Answer: "I have no nature and can't do a thing no feeling ancost."

Question: Is there any pain or pulling sensation in region of incision scar?

Answer: "I have a lot of pulling pains and sticking.'

Question: Are you constipated?

Answer: "some time and — lost of hot flashes fever at night and night sweat."

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION: Seventy-Second Annual Session and Thirty-Sixth Annual Session of the House of Delegates, Gulfport, May 9, 10, 11, 1939.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday, each month, Natchez, 7:30 p. m.

Amite County Medical Society: W. S. Stewart, Oskya, president; D. H. Thornhill, Crosby, secretary. Meets second Thursday, each month with Wilkinson County Medical Society, Field Memorial Hospital, Centreville.

Central Medical Society: J. T. Rainer, Yazoo City, president; Lawrence W. Long, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. D. House, Sledge, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: William P. Warfield, Clarksdale, president; N. C. Knight Clarksdale, secretary. Meets second Wednesday each month, Alcazar Hotel, Clarksdale, 12 noon.

Coast Counties Medical Society: W. W. Lake, Pass Christian, president; D. L. Hollis, Biloxi, secretary. Meets first Wednesday, each month at night.

Delta Medical Society: C. W. Patterson, Rosedale, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

Desoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4, Memphis, secretary. Meets first Monday of January, April, June, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Harrison, Philadelphia, president; Bob A. Cameron, Meridian, secretary.

Franklin County Medical Society: C. A. Everett, Bude, president; L. Costley, Meadville, secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: B. B. Martin, Jr., Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Mississippi State Charity Hospital, Vicksburg, 7 p. m.

Marshall County Medical Society: C. R. Senter, Byhalia, president, Herbert Phillips, Holly Springs, secretary. Meets second Thursday each month, alternating between Byhalia and Holly Springs.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary.

North Mississippi Medical Society: R. M. Adams, Ripley, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen Counties Medical Society: Dr. R. J. Brown, Iuka, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September, December.

Pike County Medical Society: E. M. Givens, McComb, president; T. Paul Haney, Jr., McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Sunflower County Medical Society: U. S. Wasson, Moorhead, president; H. B. Cottrell, Indianola, secretary.

Tallahatchie County Medical Society: G. tower, Webb, vice president; J. E. Powell, Charleston, secretary.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: R. B. Zeller, Hazlehurst, president; J. C. McGuire, Hazlehurst, secretary. Meets June 14, Walthal Hotel, Tylertown; September 13, Riverside Hotel, Monticello; December 13, Whitworth College, Brookhaven, 12:30 p. m.

Webster County Medical Society: E. F. Arnold, Bellefontaine, president H. K. Curry, Eupora, secretary.

Wilkinson County Medical Society: C. E. Catchings, Woodville, president; E. M. Butler, Centreville, secretary. Meets second Thursday, each month, with Amite County Medical Society, Centreville.

Winona District Medical Society: T. J. Brown, Grenada, president; S. B. Caruthers, Grenada, secretary.

MISSISSIPPI STATE BOARD OF HEALTH

The outstanding record of the Pike County Health Department has merited national attention in recent weeks. In the public health contest just conducted by the United States Chamber of Commerce, the Pike County Health Department carried off first honors in the Southeastern section for the second successive year.

In an appraisal made by the Commonwealth Fund of New York, a philanthropic organization which sponsors public health work in several states, Pike County was given highest score for public health performance in the United States of health departments in which the Fund is interested.

Developments of recent months in the Pike County Health Department program have been the opening of the new home of the department May 5, and the beginning of a program of maternity care for the indigent which will start July 1.

The Health Center is a $50,000 structure equipped with newest and best facilities for public health work. A Child Health Day program including a parade, a talk by Dr. Felix J. Underwood, State Health Officer, and several other features characterized the opening of this building.

Regarding the maternity program, this county will be the first in the state to offer to physicians free maternity nursing service at time of delivery. This service will aid materially in lowering the death rate of mothers and babies, according to eminent obstetricians.

As a measure in the statewide celebration of Child Health Day, Dr. J. A. Milne, Director of County Health Work, and State Child Health Day Chairman, addressed two audiences in Grenada, May 5. The development of full time health departments where none exists was one of the objectives of Child Health Day, and to a group of citizens called together by the PTA, he outlined the advantages such a unit would afford them and their children. "Mental Health" was the subject of his talk to Grenada high school students.

On May 10 and 11, Dr. A. L. Gray, Director of Preventable Disease Control, attended the meeting of the Tennessee Public Health Workers' Association in Nashville, where he delivered a talk on "The Modern Conception of Typhoid Fever Investigation."

Dr. George P Evans of Jackson, Secretary-Treasurer of the Mississippi Dental Association, has returned from a three-week travel scholarship to dental clinics in the North and East. Doctor Evans observed dental programs with especial reference to preventive dentistry among children. Since rapid progress has been made in children's dentistry in recent years, it is the mutual desire of the State Board of Health and the Mississippi Dental Association to have available the most advanced information to guide Mississippi's nationally recognized dental health program.

"The History of Public Health and Medical Licensure in Mississippi" by Dr. Felix J. Underwood and Dr. R. N. Whitfield was released during May and covers compactly the period from 1798 to 1937. A detailed and factual record of the public health program since its beginning, the volume presents the hazards Mississippi physicians have faced through this period, the work accomplished, and much other pertinent information such as lists of board members, county health officers, appropriations, and milestones. The book sells for $1.00, and may be bought through the State Board of Health.

Physicians throughout the state are being offered a course in syphilology through cooperation of the State Medical Association, the State Board of Health, and the Medical Extension Division of Tulane University.

Dr. B. J. deLaureal and Dr. M. T. Studdiford, professors at Tulane Medical School are lecturers for these courses.

Dr. Maxwell E. Lapham, Director of the Division of Medical Extension, Tulane University, visited several Mississippi counties during May as consultant for health officers who are conducting antepartum conferences.

Miss Luna Mask of Darling was awarded second honorable mention in the National Gorgas Essay contest, participated in by more than 18,000 juniors and seniors in high school. The subject of the essay was "The Achievements of William Crawford Gorgas and Their Relation to Our Health."

First prize of $500 in the national contest was won by Miss Frances Babin of Memphis, who was presented with $500 by President Roosevelt at the White House.

Miss Margaret Murphy, advisory nurse with the Alabama State Department of Health, Montgomery, spent the second week of May in Mississippi observing procedures here with Miss Mary D. Osborne, Supervisor of Public Health Nursing.

Preparatory to launching Mississippi's rabies control program made possible by this year's legislation, Dr. Felix J. Underwood and Dr. H. C. Ricks, Director of the State Hygienic Laboratory, visited the Alabama State Health Department, May 3-4, observing the work done by Dr. Charles N. Leach under the supervision of the Rockefeller Foundation.

The Mississippi and Alabama Departments will co-operate with the Rockefeller Foundation in a two-state rabies study and will send to Montgomery portions of the brains of all dogs developing conditions diagnosed as rabies where the history of the animal shows he has been vaccinated. The same card system will be kept by both health departments.

On May 12, Doctor Underwood attended the meeting of the Vocational Board in the Department of Education, Old Capitol.

Three county health nurses have just been awarded four months' nursing scholarships to be taken this fall. Miss Christine Causey, staff nurse in Pike County and Miss Thelma Parker, staff nurse in Holmes County, will go to East Harlem and Columbia, while Miss Agnes McGovern, staff nurse in Leflore County, will go to Vanderbilt and Ruterford County, Tennessee.

On May 15, Dr. J. P. Wall, President-elect of the State Medical Association represented the State Board of Health at a Sunday afternoon meeting of Howard Williams' revival in Jackson. To an audience of more than 1000 women and girls Doctor Wall told of the alarming spread of venereal diseases among women, especially those of high school and college age. He also gave facts and figures on other phases of the sex question.

One week later, Dr. Felix J. Underwood gave a similar talk to men and boys.

Dr. Paul S. Parrion, Director of the St. Mary Parish Health Department, Franklin, La., observed the work of the Pike County Health Department during the last week of May. The St. Mary Parish Health Department is to be developed as a state training base and field experiment center for rural health workers.

The current issue of the "Journal of the Connecticut State Medical Society" carries an article by Dr. W. L. Little, retired President of the Mississippi State Medical Association, entitled "Public Health Values As Seen by the President of the State Medical Association."

Newly completed statistics for 1937 reveal that heart disease is still by far the leading cause of death in Mississippi.

There were 2938 deaths from heart disease, 2100 from nephritis, 1850 from pneumonia, 1544 from cerebral hemorrhage, cerebral embolism and thrombosis, all increases over 1936 figures. Deaths from accidental causes showed a gratifying decrease from 1682 in 1936 to 1394 in 1937, indicating the value of safety education. Cancer deaths increased from 1278 to 1335 in a year's time, and tuberculosis from 1258 to 1300.

"It is in these fields where the loss of life is greatest that the greatest effort to save lives must be exerted," Doctor Underwood stated.

A three-weeks' training school on malaria diagnosis is starting June 1 at the State Hygienic Laboratory. The course is being conducted by Miss Aimee Wilcox, native Jacksonian, now of the Malaria Research Division of the U. S. Public Health Service in Washington. The identification of malaria parasites and other technical phases of malaria diagnosis are included in the course of instruction. Laboratory technicians from various sections of Mississippi and several students from Louisiana and Oklahoma are attending the school.

National engineering magazines, "Civil Engineering" and "Public Works," recently carried articles and photographs of malaria control work done in Mississippi. The "Southern Medical Journal" will contain an article in June on "The Different Phases of Permanent Drainage for Malaria Control in Mississippi," illustrated with pictures showing the type of work done in this state.

Major J. A. LePrince, Sanitary Engineer Director, U. S. Public Health Service, famed for his malaria and yellow fever eradication accomplishments in Havana and Panama, said, "When the history of malaria eradication work in the United States has been written, the job done in Oxford will have an outstanding place." Major LePrince, in a recent article in a Memphis newspaper, stated, "It has taken us Americans thirty-five years to begin to get the idea of malaria control, and while foreigners have adopted and carried on the methods that Gorgas originated on the Isthmus, we here in the Southern states, have only recently begun to use them. But we are making rapid strides. In northern Mississippi, 40 towns and villages started during the past year permanently to build malaria out of existence. No other state has such a record to be proud of."

Starting May 21, staff conferences for the State Board of Health were inaugurated, and will be held every first and third Saturday mornings at 10:45. Called together for their first gathering by Dr. Felix J. Underwood, the group discussed recent trends in public health, different phases of which will comprise the subject matter of these meetings.

Dr. Harley Shands and Dr. Frank Hagaman of Jackson gave to the State Medical Library during May large quantities of journals on surgery. Book plates are being used for each of the donors. Through such gifts the two year old library is growing rapidly, and physicians are being asked to check over their books with an eye to sparing any which they can to the State Medical Library. Through this medium such volumes will be accessible to all physicians of the state.

Dr. J. A. Milne, Director of County Health Work, is visiting numerous county health departments throughout the state regarding 1938-39 programs and budgets which will start July 1.

Dr. Felix J. Underwood will go to the West Coast during June for a three-purpose, three-weeks' trip. As President of the State and Provincial Health Authorities of North America, he will attend the western branch of the American Public Health Association in Portland, Oregon, June 6-8. He will meet Dr. John A. Ferrell, Associate Director of the Rockefeller Foundation, in Vancouver, British Columbia, for an inspection of the Vancouver Health Department, June 9-10.

As an official delegate to the American Medical Association, Doctor Underwood will meet Dr. Harvey F. Garrison, past President of the Mississippi Medical Association, and Dr. Joe E. Green, President of the Mississippi Medical Association at present, for the annual meeting of the A. M. A. to be held in San Francisco, June 13-17. The State Health Officer will be back in Jackson for the meeting of the members of the State Board of Health, June 22-23.

On May 29, Dr. Felix J. Underwood talked to the Men's Brotherhood Bible Class of the Power Memorial Presbyterian Church, Jackson, on "Maintaining Personal Efficiency."

Dr. John W. Shackelford, Greenville, Director of the Washington County Health Department, will become Director of Field Unit, Oklahoma State Board of Health, Oklahoma City, effective July 1. At the same time Miss Margaret Finley and Miss Beasley, clerks with the Marshall and Lincoln Health Departments, will also go to the Oklahoma state health office. The Mississippi State Board of Health regrets the loss of these splendid workers, but it is felt that their selection for the Oklahoma positions reflects credit on the Mississippi public health program.

Funds raised by Birthday Balls in Mississippi to fight infantile paralysis total $6559.12, an increase of almost $1000 over last year, according to Dr. Felix J. Underwood, State Chairman of the President's Birthday Ball celebration this year. A National Foundation for poliomyelitis research, epidemic first aid, proper care, and adequate clinic facilities for combatting human wreckage will be supported by these funds.

Board of Health radio speakers over WJDX at 9:30 each Saturday morning during May together with the subject of their talks were:

May 7.—Dr. H. M. King, Pastor of Calvary Baptist Church, Jackson—"Mother's Day."

May 14.—Dr. A. L. Gray, State Director of Preventable Disease Control — "Hitch-Hiking Into Your Mouth."

May 21.—Dr. Felix J. Underwood, State Health Officer—"Sensible Vacations."

May 28.—Dr. George E. Riley, State Supervisor of Malaria Control—"Malaria in Mississippi."

Jackson, Felix J. Underwood,
June 1, 1938. Executive Officer.

POSTGRADUATE MEETING

A postgraduate meeting was presented by the faculty of Tulane University School of Medicine for the Central Medical Society at Jackson, June 7. Dr. Harvey F. Garrison was program chairman and all doctors of Mississippi were cordially invited.

The program as announced by Dr. Lawrence W. Long, secretary, was as follows:

MORNING SESSION

Dr. J. T. Rainer, President, Presiding

Convention Hall

9.30—Indications for Blood Transfusion (Moving Picture of the Technique)—Dr. Michael De Bakey, Instructor in Surgery.

10:10.—Management of Urinary Infections. —Dr. Edgar Burns, Assistant Professor of Surgery.

10:50.—Medical Management of Gastric Hemorrhage.—Dr. D. C. Browne, Instructor in Medicine.

11:30.—Ruptured Intervertebral Disc as a Cause of Sciatic Pain.—Dr. Dean H. Echols, Instructor in Surgery.

12:10.—The Classification of Nephritis of Childhood, With Brief Remarks on Treatment. —Dr. J. Graubarth, Instructor in Pediatrics.

Round Table Luncheons

1. Dr. T. H. Blake, Presiding.

Place: Japanese Tea Room.

Surgery, Gynecology, Obstetrics, Eye, Ear, Nose and Throat.

2. Dr. W. R. Bethea, Presiding.

Place: Rooms G & H.

AFTERNOON SESSION

Dr. F. H. Hagaman, President-elect, presiding
Convention Hall

2:00.—Moving Pictures of Tumors of Larynx.—Dr. F. E. LeJeune, Professor of Otolaryngology.

2:40.—Tests for Kidney Function.—Dr. Philip H. Jones, Assistant Professor of Medicine.

3:20.—Post-Reduction Treatment of Simple Fractures.—Dr. Guy A. Caldwell, Professor of Clinical Orthopedics.

4:00.—Management of Harelips and Cleft Palate.—Dr. Neal Owens, Instructor in Surgery.

4:40.—A Roentgen-Ray Diagnosis of Lesions of the Large Intestines.—Dr. Leon J. Menville, Professor of Radiology.

5:20.—Chronic Endocervicitis, Symptoms and Treatment.—Dr. Conrad G. Collins, Instructor in Gynecology.

FELLOWSHIP HOUR

6:00.—Dr. N. F. Kendall, presiding
Roof Garden

7:00.—Dr. J. P. Wall, President-elect, Mississippi State Medical Association, Toastmaster—Convention Hall.

EVENING SESSION

Dr. J. P. Hall, presiding
Convention Hall

8:00.—Obstetrical Abnormalities as Handled in the Home.—Dr. Arthur Claire, Jr., Assistant Professor of Obstetrics.

8:40.—Pre-operative and Post-operative Treatment.—Dr. Mims Gage, Associate Professor of Surgery.

9:20.—The Epidemiology and Diagnosis of Amebiasis.—Dr. Ernest Carroll Faust, Professor of Parasitology.

DRY CLINICS
(Morning Session)
Dr. A. E. Gordin, Presiding
Roof Garden

9:30.—Fractures of Tibia.—Dr. Guy A. Caldwell.

10:15.—Plastic Repair of Burns and their Treatment.—Dr. Neal Owens.

11:00.—Endocrinology as Applied to Gynecology.—Dr. Conrad G. Collins.

11:45.—Heart Disease.—Dr. Philip H. Jones.

(Afternoon Session)
Dr. T. E. Wilson, Presiding
Roof Garden

2:00.—Head Injuries.—Dr. Dean Echols.

2:45.—Spleen—Dr. Mims Gage.

3:30.—Peptic Ulcer.—Dr. D. C. Browne.

4:15.—Feeding Problems in Infants.—Dr. J. Graubarth

5:00.—Gonorrhea.—Dr. Edgar Burns.

Jackson, June 1, 1938.

COAHOMA COUNTY MEDICAL SOCIETY and CLARKSDALE HOSPITAL MEDICAL STAFF

The Coahoma County Medical Society and Clarksdale Hospital Medical Staff were called to order in the dining room of the Alcazar Hotel immediately after lunch on June 8, 1938. Presiding was the president, Dr. Wm. P. Warfield. Dr. L. H. Brevard of Deeson was a visitor. Minutes of the previous meeting were approved as read.

Under the heading of new business the secretary presented a book which was presented to the Society by Dr. Underwood entitled, "Public Health and Medical Licensure in the State of Mississippi, 1798-1937." The Society expressed its appreciation for this book.

Dr. N. C. Knight, the county health officer, announced the arrest of one Louis Wilbert, of Clarksdale, for practicing medicine without a license.

Election of officers for the last half of 1938 being the next order of business, same resulted as follows:

President—N. Yeates, Lula.

Vice-President—D. H. Griffin, Clarksdale.

Secretary and Treasurer—N. C. Knight Clarksdale.

Relations Committee: D. H. Griffin, chairman, W. P. Warfield, W. H. Brandon.

A motion picture entitled "Ergotocin" was then shown.

There being no further business the society adjourned.

Clarksdale, N. C. Knight,
June 8, 1938 Secretary

DESOTO COUNTY

Today the Central Medical Society is having a big meeting. Faculty members from the Tulane Medical School are conducting the lectures and clinics. Such training might be practiced with profit by other groups, both professional and business.

A European physician who has helped organize health centers in six Chinese provinces declares that modern Chinese doctors "are the equal of the medical men in any part of the world."

No one is to be despaired of as long as he breathes.—Erasmus.

Physicians from this state are successfully pursuing their work throughout the country. Many physicians in the city of Memphis, Tenn., are from Mississippi. At this time we only mention a limited number: Dr. Willis C. Campbell, grandson of the late Chief Justice, J. A. P. Campbell of the State Supreme Court; Dr. Edward C. Ellet, (his father, Hon. Henry O.

Ellet, died suddenly in Court Square, Memphis, while introducing the President of the United States, Grover Cleveland); Dr. E. M. Holder, son of the Hon. W. H. Holder, erstwhile state auditor and Confederate officer; Drs. J. A. Crisler, Sr., and Jr.; Oswald Stuart McCown; Moore Moore; Whitman Rowland; James L. Andrews; Hiram B. Everett; H. B. and N. Gotten; Frank W. Smythe; and younger men, as Drs. Dick Cauthen McCool, William Milton Adams and others, who have wrought well.

Instinctively other names come to our memory, now in Elysian fields, where all is explained that so puzzles us here: Drs. Thos. J. Crafford, Frank D. Smythe, Frank A. Jones, Frank A. Jones, Joseph E. and Eugene J. Johnson and others.

Connecticut, Massachusetts and Mississippi are the three states in the Union that label birth control as illegal but do not interfere with the legitimate work of the physician.

Rev. John Wesley, founder of Methodism, was a pioneer in the use of electricity in the treatment of nervous disorders.

The press reports an article read before a medical association by Dr. Nicholas Gotten and associates on head injuries, summarizing a number of cases in Philadelphia and vicinity. The age of the patient is a material figure in the mortality rate, the older the patient the greater mortality. Dr. Gotten is an alumnus of the University of Tennessee, served two years in General Hospital, Philadelphia, he remained in that city for several years specializing in psychiatry and allied subjects. He removed to Memphis some two years ago and has his office at the Polyclinic. He and Dr. Carroll C. Turner are associated in the Turner-Gotten Sanatorium, located in the eastern suburbs of Memphis.

As a pleasing invocation in this column, we hope to have the autobiography of each of our members; it is fitting that we have first, Dr. Angus L. Emerson of Hernando, our oldest member in years, but not in spirit and activity.

I hope the other members will send me their autobiographies along the lines of Dr. Emerson's.

Rt. 4, Memphis, Tenn. L. L. Minor
June 10, 1938. County Editor

AUTIOBIOGRAPHY

Dr. A. L. Emerson

I was born near Brownsville, Tennessee, May 7, 1865. It was just about twelve o'clock. Papa said May 6th, mother May 7th, so I took mother's word. We lived at this place until 1870. Father lost all of his negroes and property, so he decided to move to Mississippi with his five boys and raise cotton.

We located five and one-half miles west of Hernando in 1870. We rented land and lived in different parts of DeSoto County. Father died in 1875, leaving mother, five boys and three girls.

We had only three months of free school during my school years. I did not get to attend but very little for I had to help support mother, a widowed sister with two children, a blind brother's sick wife and three children, out of the field by manual labor.

In 1887, Col. T. W. White told Brother J. W. Lee, the Baptist minister here, that if he knew of a boy who wanted to go to school he would let him have the money provided the boy would go to Mississippi College. Brother Lee decided on me, a man 22 years old who could scarcely read and write.

I went down to Mississippi College but could not enter, so President Webb put me in a preparatory school with a lot of children, I, a man with a mustache. I attended Mississippi College four years but did not graduate for it would have taken me two years longer. In 1890 the curriculum in medicine was raised from two to four years, so I cut two years in Mississippi College and made two years in medicine.

I graduated in medicine at Memphis Hospital Medical College the session of 1892-93. After graduating I decided I did not know enough medicine to go out and practice. I then served as intern at the old City Hospital, Memphis, Tenn., for eighteen months, at the County Hospital for eighteen months and begun the practice of medicine the fall of 1895. In 1896 bought out Dr. S. M. Watson at Eudora. In 1897 took a course at the New York Polyclinic, also did postgraduate work at Tulane. Married Hattie Whitley, April 11, 1900—five children, two boys and three girls. Moved to Hernando 1910.

I am a member of: Baptist Church, Desoto County Medical Society, State Medical Association, Tri-State Medical Association, American Medical Association, Masons, Eastern Star, K. P., Rotarians.

Have served as: President of DeSoto County Medical Society, Vice-President, State Medical Association, Member of Baptist Hospital Board before dirt was broken to build, Member of State Baptist Executive Board for a number of years, County Health Officer, 12 years.

I have helped to educate several boys and girls at Mississippi College and Blue Mountain College. Have done a general practice in DeSoto County for 42 years.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Vicksburg, Tuesday, June 14, with Dr. B. B. Martin, Jr., Vicksburg, president, presiding.

The program:

(1) Some Aspects of the Psychoneuroses.—Dr. C. H. Denser, Mississippi State Hospital, Whitfield.

(2) Some Aspects of Psychotherapy.—Camille Estornelle, Ph.D., Vicksburg.

Discussed by Drs. S. W. Johnston and F. M. Smith. Dr. Estornelle closed.

Case Report—Mastoiditis With Meningitis; Recovery Following Operation and Sulphanilamide.—Dr. Edley H. Jones.

Discussed by Dr. Alston Callahan.

Report of the Out-Patient Clinic operated under the direction of the Society for the month of May showed 1,443 patient visits. divided as follows: Medical, 226; surgical, 247; obstetrical, 50; gynecological, 80; eye, ear, nose and throat, 86; orthopedic, 25; pediatrics, 24; genito-urinary, 554; admitted to hospital, 151.

The schedule for the weekly educational radio program to be furnished by the society for the third quarter, 1938, was presented by the committee, Dr. F. M. Smith, chairman, and approved as follows.

Every Wednesday From 1:00 to 1:15 p. m. 1938.

July 5.—Factors Affecting Hearing.—Dr. Edley H. Jones.

July 13.—The Foot—Its Care, Its Abuse.—Dr. Walter E. Johnston.

July 20.—The Need of Trained Obstetric Attendants.—Dr. I. C. Knox.

July 27.—A Health and Helpful Community Attitude to Venereal Disease Control.—Dr. Nathan B. Lewis.

Aug. 3.—Some Benefits the Layman Drives From Laboratory Studies and Reports.—Dr. Leon S. Lippincott.

Aug. 10.—Some Worthwhile Things a Modern Hospital Gives and Offers the Community. —Dr. B. B. Martin.

Aug. 17.—Fatigue and Rest, Factors in Health. —Dr. A. J. Messina.

Aug. 24.—Pain in the Abdomen.—Dr. W. H. Parsons.

Aug. 31.—Measles and Its Aftercare.—Dr. D. A. Pettit.

Sept. 7.—Our Blood Pressure—Its Significance. —Dr. W. C. Pool.

Sept. 14.—Do Doctors Understand and Fairly Evaluate the Economic and Physical Needs of Their Patients?—Dr. H. S. Provine.

Sept. 21.—"Fainting Attacks"—Dr. W. K. Purks.

Sept. 28.—How Much Does the Baby Grow; How Much Does It Learn in the First Year of Life?—Dr. W. Pierre Robert.

The next meeting of the Society will be held Tuesday, July 12 and the subject will be "Diseases of the Blood." The committee in charge consists of Drs. N. B. Lewis, Vicksburg, Chairman; H. S. Goodman, Cary; H. S. Provine, Tallulah; D. P. Street, Vicksburg.

HUMPHREYS COUNTY

Mrs. J. N. Mecklin and sister, Miss Hettie Smith, Louise, are spending several days in New Orleans.

Dr. and Mrs. W. A. D. James, Midnight, honored their daughter, Miss Virginia, and several friends with a theatre party in Belzoni June 1. Miss James has just completed her first year's work at Sunflower Junior College.

Mrs. Milton Branton is visiting her parents, Dr. and Mrs. Guy Bryan, Silver City. Her home is in Dayton, Texas.

Recent business visitors in Memphis were Dr. and Mrs. J. W. Jackson, Belzoni.

The Humphreys County Medical Auxiliary met Friday. June 1, and reorganized. We hope to be able to raise some money in the near future to send to the Preventorium. Our Auxiliary has been the most active in the Delta unit and we are justly proud of it.

Belzoni, J. W. Jackson,
June 7, 1938. County Editor

LEFLORE COUNTY

Drs. J. C. Adams and S. L. Brister, Jr., attended the Inter-Club Golf tournament at Yazoo City, May 5.

Dr. W. J. Lusk, Ruleville, visited Greenwood May 10.

Dr. and Mrs. T. M. Riddle, Swiftown, attended the Sabin-Gwin wedding in Greenwood, Thursday night, May 12.

Dr. and Mrs. R. B. Yates attended the recital of their daughter, Miss Marjorie, at Sophie-Newcomb, New Orleans, May 18.

Dr. R. C. Smith, Drew, attended the funeral of Mrs. Gene Duggan here, May 22.

Dr. J. D. Rudisill, Lenoir, N. C., was a visitor in the home of his sister, Mrs. J. C. Lore, Greenwood, May 26.

Dr. Sam Gwin Mounger, Greenwood and Yazoo City, will be married to Miss Katherine Davis of Oxford in June.

Dr. and Mrs. W. E. Seale, Crenshaw, and Dr. H. T. Ashford, Clinton, spent Sunday, May 30, in the home of Mr. and Mrs. Richard Denman.

Dr. and Mrs. R. E. Wilson entertained, with a buffet supper, at their home on River Road at 7 p m., June 1, in honor of Dr. and

Mrs. W. E. Denman, Jr., who will leave soon for New York.

Greenwood, W. B. Dickins,
June 2, 1938. County Editor.

WASHINGTON COUNTY

Dr. O. H. Beck was one of the Greenville team competing in the Delta golf tournament during the month of May. It is reported Dr. Beck did yeoman service for the home town team, although the team was eliminated before the finals.

Dr. P. G. Gamble spent the latter part of May visiting surgical clinics in Chicago.

Dr. and Mrs. F. M. Acree have entertained as guests at their home in Greenville, Dr. and Mrs. L. B. Newman of Sunmount, New York. Mrs. Acree entertained at tea about two hundred guests Tuesday afternoon, May 31, in honor of Mrs. Newman and Mrs. Williams, wife of Dr. John Williams, recently associated in practice with Dr. Acree.

Mrs. W. P. Shackelford of Hollandale, was a patient of King's Daughters Hospital at Greenville for several days during the middle of May. Her illness was not of a serious nature, and she is reported fully recovered.

Dr. John Shackelford, head of the Washington County Health Department since January, 1930, announced his appointment as director of Field Technical Units of the Health Department of Oklahoma. This is a distinct promotion for Dr. Shackleford and a deserved recognition of his high qualities as a physician and a public health official, qualities which have been truly appreciated by physicians of Washington County. Dr. Shackleford will be replaced July 1, after which he will spend about two months in postgraduate work in this state and Tennessee. His successor has not yet been named. His many friends wish him well and are confident of his future success.

Greenville, J. A. Beals,
June 2, 1938. County Editor.

WINSTON COUNTY

Dr. Everett Lovorn of Clayton neighborhood went to a Meridian hospital this week for treatment.

Dr. and Mrs. T. F. Kilpatrick and granddaughter, Miss Otis Kilpatrick, visited their son and daughter, Dr. and Mrs. J. F. Kilpatrick at Clarksdale, last week-end.

Dr. and Mrs. H. B. Watkins attended a luncheon with their brother and family, Dr. and Mrs. W. L. Watkins, at Philadelphia the 28 ult.

Little Miss Rosemary Owens of New Albany, daughter of Mr. and Mrs. Walton Owens, and granddaughter of Dr. and Mrs. W. W. Parks of our city, recently was named winner of a juvenile hour on the radio, sponsored by a Memphis business each Saturday. She was awarded the loving cup for her song and dance originated by her.

Dr. E. L. Richardson, who has been confined to his bed with arthritis for some time, we are glad to say, is out again.

We regret to hear that Dr. S. W. Pearson had to take his wife to a Houston hospital for appendicitis. We hope she may stand the operation well and be able to return in a few days.

Louisville, M. L. Montgomery,
June 1, 1938. County Editor

INTERPRETING MEDICAL LITERATURE

SURGERY

A. Street, Vicksburg.

Comedo Carcinoma of the Breast.—Lewis, Dean and Geschickter, Arch. Surg., 36, 225-244 (February) 1938.—James Ewing is quoted as stating that this is a form of duct carcinoma occurring either as the localized or diffuse type. In the localized form, there is usually a small breast with a little fat near the nipple and there is apt to be marked cicatrization. Cancer begins in the ducts near the nipple and produces a localized cancerous mass in a small and contracted breast. Yellowish or black acne pustules in the skin may form and, on that account, this type is sometimes called comedo carcinoma. Bloodgood is quoted as stating that the term comedo carcinoma is used because the cut surface of the tumor exudes many grayish white granular cylinders when pressure is made on the tumor, suggesting the appearance of expressing the contents of comedones. Geschickter agrees with Bloodgood as to the origin of the term.

In the diffuse type, the entire breast is enlarged so that a single tumor may not be palpable. The overlying skin is thinned and small nodules may be palpable in it. The skin is liable to be of the pigskin type. The breast is not usually fixed to the chest wall. Axillary metastases do not occur until late, if at all. The tumor is slow-growing. Nipple discharge may be present.

In the localized form, the tumor is small, usually situated close to the margin of the areola and just below the skin, and freely movable on the deep structures. Axillary nodes are rarely involved. Yellowish or watery discharge from the nipple is common. The affected breast is only slightly larger than the uninvolved breast. The tumor is firm and irregular. There is atrophy of the fat between the tumor and the skin. Retraction or fixation of the nipple often occurs, and occasionally, burning and itching of the nipple, a symptom more common in Paget's disease. The discharge from the nipple is sometimes serosanguinous. The tumor is located near the skin and dimpling of the skin occurs. The tumor remains movable on the deep parts. Several tumors may be found in the same breast and the growth may be bilateral.

Of all forms of breast carcinoma, comedo carcinoma offers the most favorable prognosis. In the group reviewed, there were 85% five-year cures, with many patients well for over five years, some for over ten, and some for over twenty years. Although the tumor is slow-growing and axillary metastases occur late, if at all, local excision is often followed by local recurrence. Therefore, the only satisfactory treatment is radical mastectomy, including axillary dissection.

In cases in which metastases occur, the involved lymph nodes show the characteristic thick walled ducts lined by secretory epithelium, with numerous transitions toward basal cells, indicating clearly that the tumor cells are capable of forming new ducts and are not simply invading pre-existing ducts. Other forms of breast carcinoma may invade the ducts. This may occur in adeno-carcinoma and in the duct cancer related to Paget's carcinoma. In the latter form, the tumor cells approach squamous epithelium in type. The growth of the tumor is rapid and the prognosis is poor.

Typical scirrhous carcinoma (infiltrating adenocarcinoma) occasionally invades the smaller ducts; but it also invades the fat and fibrous tissue, which does not occur in typical comedo carcinoma.

Comment. Unfortunately, this slow-growing type of breast cancer, with little tendency to metastasis, and presenting favorable prognosis when treated by radical mastectomy, comprises a very small per cent of all cases of breast cancers. However, it is important to bear in mind the clinical and microscopic picture of comedo carcinoma so as to avoid confusing it with benign lesions. Any type of malignant growth in the breast may at times closely resemble benign breast disease. For instance, it is not infrequent to see cancer present in a breast showing advanced chronic cystic mastitis. It seems so thoroughly impossible to be sure, from clinical examination, that any mass occurring in the breast is benign, that we can only urge the absolute necessity of removal of all masses developing in the breast for microscopic examination, so as to determine proper treatment.

Common and Hepatic Duct Stones: Frank H. Lahey, A. J. Surg. 40, 209-216 (April), 1938. Dr. Lahey states that there are no harmless gallstones and that all gallstones should be removed. Neglected cholelithiasis may be expected to result in advancing pathologic changes in the biliary tract, and changes in the common and hepatic ducts, which predispose to stone formation there. Since stones may exist in the gallbladder without symptoms, physical examinations should include gallbladder investigations whether biliary symptoms are present or not. Operation before advanced pathologic changes occur would result in lower mortality.

Most common and hepatic duct stones do not originate in the gallbladder and pass to the common duct, but are formed in the bile ducts.

Failure to operate for gallstones may result in an acute surgical emergency, cholecystitis or obstructive jaundice, in advanced age, when surgical risk is poor.

Former criteria for exploring the hepatic duct consisted of: (1) large cystic duct; (2) jaundice; (3) dilated common duct; (4) palpable stone. These criteria are not considered adequate. Dr. Lahey explores the common duct in forty to fifty per cent of his gallbladder operations. The presence of a duct of normal size and without thickened wall does not mean that a stone may not be present in the ampulla of Vater. The following criteria for exploring the common and hepatic ducts are given: (1) contracted gallbladder; (2) dilatation of the common and hepatic ducts; (3) presence or history of jaundice; (4) palpable stone in the duct; (5) appearance and contents of the gallbladder when it is opened and inspected; (6) appearance of bile aspirated from common duct. Clear golden yellow bile indicates absence of stone. Cloudy black bile or bile containing flocculi, indicates presence of stone. Stones are found in fifty per cent of ducts explored.

The sphincter Oddi is dilated, using the Backus dilator up to nine millimeters. The duct is always drained, using a T-tube with the ends of the T shortened. In the presence of common duct disease, the tube is left in place for two months. On discharge from the hospital, the patient is instructed to tie off the tube during the day and to allow it to drain into a bottle at night.

Comment: Detection and appropriate surgical treatment of calculous common or hepatic duct disease cannot be too strongly emphasized. The clinical improvement following relief of obstructive jaundice by choledocholithotomy and drainage is nothing short of spectacular. The duct drain is often removed too soon. Dr. Lahey leaves the T-tube in place for two months. This prolonged period of drainage is very necessary in accomplishing the cure of damage to liver tissue and ducts, resulting from biliary obstruction and infection and in preventing complications, such as recurrent jaundice and deep wound abscess during the convalescent period.

Advisability of incision and exploration of the common duct in the absence of obstructive symptoms, dilatation or thickening of the duct wall, may be open to some question. Aspiration of bile from the common duct for inspection may be a valuable aid. It seems that the appearance of the liver should also be important. A patient showing a large firm liver with blunt edge is often benefitted by prolonged drainage of the gallbladder or common duct.

Dr. Lahey advocates early operation for gallstone disease, regardless of whether or not the disease is causing symptoms. This attitude seems justifiable when dealing with fairly young patients who are free of other serious disease. On the other hand, many patients are of advanced age when first seen and others present associated disease which must be considered. It is true in biliary surgery that operative mortality is lower among patients showing the least pathologic change; however, I have observed that clinical results are best in those patients showing more advanced pathologic change.

PEDIATRICS

Harvey F. Garrison, Jackson

Influence of Tonsillectomy on Rheumatic Infection: Ash, Rachel: Am. J. Dis. Child. 55: 63-78 (January) 1938.—In order to determine the influence of tonsillectomy on rheumatic children, a study was made of 532 children with rheumatic infection seen at the Children's Hospital during the years from 1922 to 1936. From this study, the following observations were made:

Tonsillectomy did not prevent recurrences of rheumatic manifestations.

Neither the presence or the absence of tonsils at the time of the initial infection nor the removal of tonsils subsequent to the onset had any demonstrable influence on the incidence of cardiac involvement or the death rate, due consideration being paid to the associated variable statistical factors.

A high incidence of rheumatic exacerbations followed immediately on tonsillectomy performed early in the course of the disease.

Tonsillectomy for the rheumatic child seems to be indicated only when there is definite evidence of disease in the tonsils, and not as a routine procedure. The operation should only be performed during an inactive phase of the infection. Associated with the absence of other symptoms, the combination of a normal temperature curve and a normal sedimentation rate of the erythrocytes may be taken as indications of an inactive phase.

Comment: This is a most interesting article, and I thought that it would be of interest to the practitioner of medicine in Mississippi just at this time, since we are doing most of our tonsillectomies in children in the summer and the fall. This investigation reveals some interesting facts to all of us.

Epidemic Diarrhea of the Newborn. — Epidemiology of Outbreaks of Highly Fatal Diarrhea Among Newborn Babies in Hospital Nurseries. Frant, Samuel, and Abramson, Harold: Am. J. Pub. Health, 28:36, 1938.—Present methods for the prevention of diarrheal disorders are singularly inadequate. The persistent prevalence of enteritis not only among adults, but more particularly among infants and children, remains a problem challenging concerted attempts at solution.

In the summer of 1934, an unusual number of deaths were taking place among normally delivered newborn babies in the nurseries of one of the general hospitals in New York. The infants were succumbing to a fulminating form of intestinal intoxication whose clinical course could not be stemmed by recognized methods of therapy. When the outbreak finally abated, 72 babies had been attacked, and 32 of these had died.

Since this initial outbreak, somewhat over three years ago, the writers have had the unusual opportunity of following 23 such outbreaks in 15 hospitals giving maternity care. From July, 1934, to July, 1937, they have followed the postnatal course of 4,594 liveborn babies.

Among these, 711 cases of the disorder are known to have developed with an attendant average morbidity rate of 15.5 per cent. Of the sick infants 335 died, the average mortality rate being 7.3 per cent of the infants exposed and the case fatality rate 47.0 per cent. In addition to the above morbidity and mortality, there also occurred an incidental neonatal mortality of 32 per 1,000 live birth from causes other than diarrhea, as well as a stillbirth ratio of 29.

The prevalence of epidemic diarrhea, as indicated in this article, refects the infant mortality rate in New York, and although a satisfactory reduction has been evidenced in the death rates from all causes of infants, from one month to one year of age, an analysis of the vital statistics record of New York City, would indicate that little has been accomplished in effecting a satisfactory lowering in the death rates of infants in the neonatal period. In fact, as far as diarrhea deaths are concerned, statistics indicated a steady ascent among newborn in recent years. The writers of this article attribute this increased mortality to the previously unrecognized clinical entity, "Epidemic Diarrhea in the Newborn." Epidemiology of this disease in the newborn, would indicate that there is no sex difference present and quite unlike the summer diarrhea of the past, but very little variation is exhibited in morbidity and mortality from one season to another.

The spring and summer incidence is but very little different from the fall and winter incidence. Geographically, the disorder has thus far been recognized only in cities of the United States, and in other countries lying within the north temperate zone.

The feeding seems to make but very little difference in the incidence of the disease in either the breast fed or the artificially fed infants, however, this distinction is no longer so sharply defined, because of the present practice of giving supplementary or complementary feedings to nearly all of the newborns. Although, it would indicate that infants born to the poorer classes of the city have been attacked most heavily, yet the babies of the better classes are also affected, depending upon the operating interrelationships of the ward and private maternity services of the various individual hospitals. It is also evident that once the infection gains a foothold in a nursery, the apparent mode of spread is from baby to baby lying in adjacent basinets. Frequently, a pre-existing nursery infection such as "thrush," "impetigo," and others appear to set the stage for the outbreak. Quite an extensive investigation to determine the specific cause of these outbreaks and to trace it down seems to have failed, however, the prevalence of this epidemic form of diarrhea with its associated high mortality rates, constitutes a situation requiring serious attention.

As the epidemics were followed, the writers recognized early the necessity for the complete revision of the present methods for the care of the newborne in hospital nurseries. The usual methods of obstetrical and pediatric practice and preventive medicine, have failed to cope sufficiently with the situation. Epidemiologically, it would seem that very definite fundamental changes in the manner of conducting maternity and newborn services would prevent the occurrence, not only of the disorder described, but of infectious diseases in general among newborn babies. Technics can be evolved which would break the chain of transmission of disease peculiar to the newborn. Some such measures, would comprise immediate closure of infected nurseries and suspension of maternity services. Prevention of disorder is based on the principles of surgical asepsis and aseptic nursing and medical care.

As far as the future is concerned, it is indicated that a complete revision must be made in the housing of maternity and newborn services in hospitals. Greater stress should be laid on the individual care of the mother with her newborn baby.

Use of Apple Powder in the Prevention and Cure of Summer Diarrhea: Manville, Ira A., Arch. Pedit. 55:76 (February) 1938.—The chief factors contributing to the death rate during the summer months are diarrheas and dysentaries. These conditions have been successfully treated by the use of apple pulp powder. The latter is more effective and easier to use.

The apple powder is prepared from winesap apples, a variety shown to possess a very high amount of uronic acid. The pectin value of the winesap apple powder calculated as calcium pectate is 5.33 per cent, while for an equivalent weight in fresh apple it was only 3.12 per cent.

In infants, if milk powder is being used, apple powder is added in such quantities that it will constitute 4 per cent of the final mixture. If evaporated milk is being used, it is diluted to twice its volume with 10 per cent apple powder water. An older child or an adult is fed 200 c.c. of an 8 per cent solution of apple powder in water every two hours. This is increased as the tolerance of the patient permits. The balance of the dietary is composed of bland, easily digested food materials.

The responses of the children treated in this manner are extremely gratifying. Favorable results also have been obtained in the treatment of adults suffering with ulcerative colitis. The greatest value that is to be derived from the use of apple powder in the feeding of children will be in the prophylactic use of the material during the hot season, and incorporating it routinely in the dietaries of individuals suffering an elevation of body temperature. Its therapeutic value is indicated by the fact that out of 1021 cases of severe diarrhea unresponsive to other types of treatment, 1005 recovered. This provides a mortality rate of 1.5 per cent. These figures are remarkable when it is considered that this type of therapy was not instituted as a last resort. The advantages of the use of apple powder over that of apple pulp may be tabulated as follows:

1. The powder represents a product of high and uniform potency.

2. The esthetic difficulties of taste and color are overcome.

3. Co-operation of the parents will be more readily attained. "It is no easy problem to convince a mother that the very raw fruit which has often enough been the cause pre-

viously of diarrhea among children, would also correct this very disorder."

4. The bulk of the apple pulp makes dosage difficult.

5. The pulverized cellulose threads of the powder make a smoother stool.

6. The powder can easily be added to milk formulas and will produce no curdling.

7. It represents a product of uniform price, available at all times of the year.

8. It keeps well, is light and compact.

9. It is not rejected when given to children who are vomiting.

10. The preparation of the powder increases its pectin content.

Comment: The subject of summer diarrheas is especially interesting at this season of the year. It is felt that an abstract from this article at this time would be welcomed by the profession. I would not have the general practitioner believe that this is the only means of treatment, because much more can and should be said as to the general management of summer diarrheas. Apple pulp or powdered apple has its place in the treatment of this condition, but by **no means** is it a "cure all."
June 2, 1938.

RADIOLOGY AND ROENTGENOLOGY

J. A. Beals, Greenville

Roentgenology in Relation to Surgery of the Stomach, Liver, Gallbladder and Pancreas (continued).—Am. J. Surg. (April) 1938.—F. J. Hodges of Ann Arbor, a roentgenologist, discussed the practical value of cholecystography. The clinician's high esteem for this examination is indicated by the fact that the number of requests for this examination at the University Hospital nearly doubled between 1932 and 1936. This paper is a reiteration of another by the same author recently reviewed in THE MISSISSIPPI DOCTOR. Briefly, the cholecystographic indication of the absence of disease was 84 per cent correct by surgical proof, the diagnosis of disease without stone was 80 per cent correct; the occasional doubtful diagnosis of disease was 61 per cent correct; stones are recognized without the cholecystographic method in only 32 per cent of cases; but if the gallbladder can be visualized by the Graham-Cole method, even faintly, the diagnosis of stone is 94 per cent correct, although this falls to 49 per cent if the gallbladder cannot be visualized by the dye method. Hodge does not routinely use the fat meal to empty the gallbladder but finds it of great service in certain cases wherein visualization of stones is doubtful.

The intravenous cholecystographic method is no longer in general use, but C. H. McIntyre, of Kalamazoo, contributes a chapter on its use as a combined test for liver function and gallbladder disease, where the method has a double value that may in some instances offset the disadvantage of more frequent severe reactions. It is the author's impression (and the reviewer's) that the roentgen diagnostic results of the intravenous method are somewhat superior to those of the oral method.

W. G. Scott and S. Moore, of St. Louis, the latter being one of Graham's collaborators in the development of cholecystography, contribute their estimation of the diagnostic value of the faint shadow which of itself is neither clearly normal nor definitely evidence of disease. The authors emphasize the point that faintness of the shadow cannot have any meaning except in the intravenous method, for it can never be ascertained from the oral method that enough dye was absorbed and reached the circulation to permit a normal gallbladder to cast more than a faint shadow. They have tested 1,355 cases by the intravenous method in the past five years. In 176 patients the gallbladder was diagnosed as pathologic because of faint shadow. This agreed with the clinical diagnosis in 88 per cent. Figures taken from the authors' tables, although not discussed by them, show that 50 of these 176 cases were operated upon, that in 13 gallbladder was grossly normal, an error of 26 per cent as judged by this standard.

F. H. Kruse, of San Francisco, discusses the diagnosis and treatment of disease of the biliary system from the standpoint of the internist. He accords cholecystography a high place in diagnosis, second only to a searching history. He rightly stresses the unwisdom of laying the diagnosis unreservedly on the altar of cholecystography, and this is particularly true of the decision to operate.

H. L. Foss, of Danville, Penn., a surgeon, discussing the indications for operation in gallbladder disease, sharply criticizes what he conceives to be a recent tendency to perform needless cholecystectomies on a diagnosis of non-calculous cholecystitis based on a history of flatulent indigestion. He believes cholecystography competently carried out is a corrective for this evil tendency. On the other hand he correctly warns that a positive cholecystographic study unsupported by a history of gallbladder disease may lead the surgeon into needless operation, unless the diagnosis is supported by repeated tests and examinations.

F. H. Lahey, of Boston, again sets forth his thesis that hepatic and common duct stones are formed in situ, as a result of disease of these ducts, and are not, as a rule, escaped from a calculus bearing gallbladder; that these duct stones are being overlooked by surgeons when they perform cholecystectomy and content themselves with inspection and palpation of the ducts, that failure to remove these stones accounts for much of the morbidity and some of the mortality following cholecystectomy. This situation can be avoided only by opening and exploring the ducts. Lahey gives definite indications for this procedure which will not be reviewed here. The ducts have been explored by him 718 times among 2,177 patients operated upon for gallstones, and duct stones have been removed in nearly half of this number. Lahey does not refer to cholangiography in dealing with this troublesome question of duct stones. The subject has been reviewed recently in THE MISSISSIPPI DOCTOR. Briefly the ducts may be clearly demonstrated by injection of a fluid radiopaque medium, such as the "dye" used for intravenous pyelography. This can be done postoperatively through a biliary fistula or retained drainage tube. It can also be done at the operating table by injection through the cystic duct, or after the common duct has been opened for exploration as recommended above by Lahey. The postoperative visualization of the bile ducts is valuable in demonsrating any calculous or other obstruction remaining after operation and constitutes a valuable guide as to the time when drainage may be discontinued. The immediate or operating room cholangiograms in 105 cases reported by Mixter and Hermanson were very successful in demonstrating duct stones when present, and were usually reliable in demonstrating the absence of stone, which saved the patient unnecessary opening and exploration of the common duct with its attendant risk.

H. K. Ransom, of Ann Arbor, devotes a chapter to carcinoma of the pancreas and extrahepatic ducts, a condition by no means so rare as to be disregarded The roentgen findings were of greatest value in excluding carcinoma and other conditions of the stomach and colon. However, in 26 per cent of 69 cases it was possible to suspect the true nature of the tumor because of its displacement or distortion of the duodenum, stomach, or colon.

In a discussion of the complications following gastric and gallbladder surgery, H. M. Clute and H. Albright, of Boston, mention subphrenic abscess as second only to wound infection. This complication is often unrecognized because unsuspected for it causes little clinical evidence except unexplained fever. When in addition to unexplained fever a postoperative x-ray examination shows a high fixed diaphragm (particularly on the right), when there is pleural fluid or consolidated lung overlying the elevated diaphragm, and especially when fluid can be demonstrated between the diaphragm and the liver the diagnosis of subphrenic abscess becomes probable and surgical relief is demanded. The bedside chest film, of course, has a prominent place in the diagnosis of postoperative pneumonia, pleurisy, and atelectasis. These authors refer favorably to postoperative cholangiography, referred to above, in order to establish the nature of postoperative complications arising from injury of the common bile duct or other causes of persistent fistula and postoperative jaundice.

A. Ochsner, et al., of New Orleans, present a very full discussion of pyogenic liver abscess. One of the most valuable aids to diagnosis is the x-ray examination, which shows a high fixed diaphragm similar to, but not identical with, that caused by subphrenic abscess. In 28 cases studied by roentgenology the findings were positive in 82 per cent.

UROLOGY

Temple Ainsworth, Jackson, Miss.

Pentothal Sodium Anesthesia in Urologic Practice.—Ralph M. Tovell and Gershom J. Thompson, J. Urol. 36:81:87 (July) 1936, present their impressions of the value of pentothal sodium used in 350 urologic cases. They found that almost any type of instrumentation can be accomplished following induction of pentothal sodium. Manipulation of a ureteral calculus can usually be easily completed within the duration of anesthesia, as can also the various other minor surgical procedures. Pentothal sodium is an anesthetic well suited in urologic practice to many cases in which a general anesthetic is required. It is best suited to adult patients when examination or operative procedure is expected to be completed within 30 minutes.

The patient is insensitive to the necessary maneuvers, and the neck of the bladder is as a rule well relaxed. Consciousness is usually regained in 10-15 minutes after the administration of an average dose of pentothal sodium. Vomiting, headache and other distressing symptoms are rarely observed. The fact that recovery was consistently uneventful bears out the fact that renal function is not disturbed by the administration of pentothal sodium.

* * *

Bransford Lewis, Southwest Med. 21:114-118 (April) 1937, claims nephropexy is "the neglected step-child of surgery."

Instead of accepting the mere detection by palpation of a movable kidney as justification for anchorage, modern diagnosis must include following proof: (1) that kidney is pathologically movable, causing pain and other symptoms by kinking and obstruction of ureter; (2) that the symptoms can be aroused by obstructing ureter or overfilling pelvis of that side; whereas removing obstruction relieves pain at once. Confirmation is obtained by ureteropyelograms in supine, then in upright position. In cases of advanced mobility, these show kidney displaced down 3-5 in. with patient upright, and the dilated ureter leading to a dilated pelvis. Further evidence may be had by withdrawing catheter and taking additional x-rays at half-hour intervals to determine the emptying time of the pelvis and comparing this with a normal pelvis. Therapeutic test of an abdominal supporter may also be of service.

In view of the enormous number of favorable reports on nephropexy that have been presented in the past decade, the question arises as to why so many of the profession are persistently opposed to it. Can the charge of damage or mutilation be laid against it? Hardly. Conservatism — the saving of the threatened kidney—is its reason for being. Many a kidney and many a life would be saved were the stitches of anchoring taken in time. Lewis has always thought that so-called "beautiful pathological specimens," such as hydro- and pyonephrotic kidneys, should really be interpreted as a reproach to the profession. They should never be permitted to reach that stage of damage or destruction (unless congenital) but should be recognized and prevented from their downward career: Early nephropexy furnishes a shining example of such prophylaxis, preventing destruction that is sure to follow unrelieved obstruction to urinary drainage.

Dangerous? The mortality is so small that it is negligible. Edebohls reported a mortality of 1.65 per cent in 864 cases, while Billington, in 1928 reported 2,000 nephropexies on 1,500 patients: Not a death!

Loose methods of attaining diagnosis were formerly in vogue, flimsy excuses seized on by would-be surgeons ambitious for numerous operations. It is obvious that failures based on such questionable work should be ascribed to the operators rather than to the nephropexies improperly applied. It is further obvious that if the surgeon does a nephropexy on a patient who is suffering from appendicitis or gallstone colic, the failure is not the fault of the misapplied nephropexy but the fault of the operator, mistaken in his diagnosis because he has not fulfilled the exacting requirements for diagnosis. Therein lies the basis for the big and well founded progress that has latterly been made in this work: integrity of diagnosis. The operator should know exactly what he will find before he makes his incision.

Instability of anchorage and relapse is an imaginary bugbear that probably has little basis in fact. A nephropexy well done by any of the approved methods seldom if ever becomes loosened. Several surgeons have had the opportunity of examining such kidneys months or years after such operations and have found them so strongly bound in place that detaching would have been difficult. So-called relapses and failures must be looked for in other directions.

June 6, 1938.

INTERNAL MEDICINE

Laurance J. Clark, Vicksburg

A recent report in the May Annals of Internal Medicine by Dr Robert Levy of New York has been very interesting and, in all probability, will cause quite a few general practitioners to realize that few drugs are of real value in the management of heart disease. He mentions some eight or ten preparations, some of them having a very similar effect, and only a few of any proven value. Of course, as we all know, in heart failure and auricular fibrillations, digitalis continues to stand out as the most valuable drug. It has been generally stated that once an individual's heart justifies the use of digitalis, the prognosis immediately becomes very serious. I do not think that that could be considered popular opinion today because when digitalis is used properly and in the proper doses, which is not by any means standard for any two individuals, its results will have a very definite effect on the future life of the individual. There are no contraindications for digitalis when there is congestive heart failure or auricular fibrillations unless the patient is sensitive to the drug, in a few instances, where there may be other less frequent conditions. The presence of hypertension has been frequently benefited by digitalis when there is congestive heart failure. He mentions the advantages of the pure leaf over the other preparations, including the tincture and infusions. The diuretics, including xanthine groups and the mercurials are discussed and also have their place. I am glad to see him condemn the old time habit of vigorous purgation in congestive failure. I feel that this is even today a common error in therapeutics of cardiac conditions and many other conditions as well. Dr. Levy referred to work done by Isaac Starr in this group at the University of Pennsylvania Hospital in Philadelphia. They took ten popular drugs and used them in testing cardiovascular cases where they were indicated and used accurate methods of evaluating their results. This article was published in the Journal of Clinical Investigation, 1937, Volume 16. The results were rather discouraging for some of the groups of drugs, but I believe that this

piece of work deserves considerable attention.
June 5, 1938.

EYE, EAR, NOSE and THROAT

Alston Callahan, Vicksburg

Molded Contact Lenses Obrig, T. E., Am. J. Opthal. 735 (May) 1938.— The molded contact lens represents the ideal conception of a perfect contact lens, because the scleral portion can be molded to the shape of each patient's sclera, with allowance for the play of the extrinsic muscles and the forces exerted by the eyelids, maximum comfort thus being insured. At the same time, the corneal portion can be ground to correct ametropia with exactness, maximum visual acuity being insured.

Casts were made of 250 eyes, in each of which there had been an unsuccessful attempt to fit, comfortably, a contact lens. Several facts were brought to light from these casts, the most important of which being the difference between the actual corneal measurements and the previously estimated measurements.

Several methods of making molds are discussed, and the author gives his method in detail. He uses casting shells, not unlike eyecups, and for the material, has Poller's megacol. This is warmed and poured into the casting shell placed over the eye, and the eye is maintained in a steady position for at least two minutes, to allow it to be cooled, and hard. The finished molds, together with the correction desired, are sent to the Carl Zeiss company for the construction of the lenses.

Another concern of the essayist is of the proper solution to use with the contact lens; normal saline has proved unsatisfactory, and newer, buffered solutions, with pH adjustable for individual cases, are proposed.

Comment: Contact lenses, which are one of the most recent advances in ophthalmology, are unquestionably of great value. It is unlikely that they will ever replace the usual type of glasses, but in certain selected cases, they are indispensible. This newer process, described and improved on by the essayist, is an accredited advance.

Treatment of Conjunctivitis: Thygeson, Phillips, Am. J. Ophthal. 586 (April) 1938.—An understanding of the underlying mechanism by which bacteria and other agents induce conjunctivitis is essential to an evaluation of therapeutic measures.

It is believed that bacteria have no mechanical action on the conjunctiva and that their action is entirely chemical, arising from the liberation of soluble toxic products. Pathogenic bacteria may be disease producing while proliferating as follows:

(1) Superficially in the mucous film on the surface of the conjunctiva or on desquamated epithelial cells (as Morax Axenfeld);

(2) On living epithelial cells (as Koch-Weeks bacillus);

(3) Beneath the epithelium, reaching the subepithelial layers of the conjunctiva generally by way of the blood stream (as gonococcal conjunctivitis).

It is believed that viruses liberate toxins much as bacteria do, but it is probable that they multiply only within living cells, some only in the epithelium (as trachoma) and others in other tissues as well (as herpes zoster).

The defensive reactions of the normal and diseased conjunctiva are mentioned, and the importance of the use of the laboratory in the management of conjunctivitis is stressed. Of particular interest is a table the author presents, showing that in some conditions, such as Morax-Axenfeld conjunctivitis, the epithelial scraping is much more important in laboratory study than the secretion smears, while in other conditions, such as Koch-Weeks, the study of the secretion smear is more important.

In consideration of the therapeutic agents, it is pointed out that in some respects ointments are superior to aqueous solutions; they remain in the conjunctival sac longer, they can be used in higher concentrations, and they resist dilution. However, they interfere to some extent with drainage, and for this reason, in certain cases, it is not best to prescribe them. The phenol coefficient, which is of undoubted value in the measurement of antiseptics for certain conditions, is worthless when applied to their use on mucous surfaces. Silver nitrate is most commonly used, and it depends for much of its efficacy on non-specific activity, in particular on its desquamative action, which would appear to make it especially valuable in the treatment of those types of conjunctivitis in which the bacteria invade the epithelium. It is doubtful, however, if any antiseptic used locally contributes materially to the sterilization of the conjunctiva when the bacteria are actually in or beneath the epithelium.

Besides the local irrigations and the various solutions employed, there remain certain other and extremely important therapeutic measures in the treatment of the conjunctivitides: nonspecific protein and fever therapy, immunologic agents and procedures, and physical therapy, both local and general.

Administration of Polio Spray.—The recent bulletin of the American Academy of Ophthalmology and Otolaryngology contains an article giving advice for using a spray as a prophylaxis to prevent anterior poliomyelitis. It also contains an official report on cases treated during the last season.

The solution advised is 1% zinc sulphate in 0.5% saline solution.

There are two recommended methods of instillation. The first method is to use a DeVilbiss 156 tip with an atomizer and spray 1 c.c. of this solution into each olfactory fissure. It is usually necessary for the nasal membranes to first be shrunken with some ephedrine preparation and it is obvious that this method can only be used successfully by those who are accustomed to the use of a head mirror, or acquainted with the nasal anatomy and are equipped with a power spray. This method is at times quite painful and 1% pontocaine is usually used in another spray. The writer has found it advisable to use the 1% pontocaine spray preliminary to the zinc spray.

The second method is a postural one. The patient must be placed in such a position that the olfactory fissure will be more dependent. With the patient in this position 1 c.c. of the solution is allowed to run into each naris. The Proetz position (dorsal recumbent with head extended) is the recommended one but it seems to the essayist that a better position can be obtained by ventral recumbent with the head hanging so that the olfactory plate is parallel to the floor.

With both methods there is a large percentage of basilar headaches recorded, a larger percentage being recorded following the use of the postural method.

June 7, 1938.

HOSPITAL STAFF TRANSACTIONS

MISSISSIPPI STATE HOSPITAL ASSOCIATION, Tenth Annual Session, Gulfport, May 8, 1939.

Aberdeen Hospital: Third Monday, each month, 7:00 p. m.

Anderson Infirmary: First Friday, each month, 6:30 p. m.

Biloxi Hospital: First Thursday, each month, 7:30 p. m.

Bramlett Hospital: Third Wednesday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 12:00 noon.

Field Memorial Hospital: Second Thursday, each month, 6:30 p. m.

Gilmore Sanitarium: Third Thursday, each month, 8:00 p. m.

Greenwood-Leflore Hospital: First Thursday, each month 6:30 p. m.

Grenada Hospital: Second Tuesday, each month, 6:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month, 7:30 p. m.

Holmes County Community Hospital: Second Thursday, each month, 7:00 p. m.

Houston Hospital: Last Thursday, each month, 7:30 p. m.

Ivy Hospital: First Monday, each month, at 7:00 p. m.

Jackson County Hospital: Second Thursday, each month, except July and August, 7:00 p.m.

Jackson Infirmary: Last Tuesday, each month, except three summer months, 7:00 p.m.

King's Daughters Hospital, Brookhaven: First Tuesday, each month, 7:00 p. m.

King's Daughters Hospital, Greenville: First Wednesday, each month, 7:00 p. m.

King's Daughters Hospital, Gulfport: Third Thursday, each month, 8:00 p. m.

King's Daughters Hospital, Yazoo City: First Monday, each month, 7:30 p. m.

Macon Hospital: First Tuesday, each month, 7:30 p. m.

Magee General Hospital: Twenty-fifth each month, 7:30 p. m.

Mayes Hospital: First Monday, each month, 2:30 p. m.

McComb City Hospital: First Tuesday, each month, 6:00 p. m.

McComb Infirmary: Second Thursday, each month, 7:00 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Mississippi State Hospital, Vicksburg: Third Tuesday, each month, 7:00 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

New Albany Hospital and Clinic: Second Tuesday, each month, 8:00 p. m.

Newton Hospital: Second Thursday, each month.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Oktibbeha Hospital: Last Thursday, each month, 7:30 p. m.

Oxford Hospital: Last Monday, each month.

Pontotoc Clinic: First Tuesday, each month, 7:30 p. m.

Rush's Infirmary: First Friday, each month, 7:30 p. m.

Scott County Hospital: Third Wednesday, each month.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

Tylertown Hospital: Second Thursday, each month, 7:00 p. m.

U. S. Veteran's Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each

month, 7:00 p. m.

Vicksburg Sanitarium: Tenth or week of tenth, each month, 6:30 p. m.

Water Valley Hospital: Third Thursday, each month, 7:30 p. m.

Winona Infirmary: First Tuesday, each month, 7:[illegible] p. m.

GREENWOOD LEFLORE HOSPITAL STAFF MEETING

The regular meeting of the staff of the Greenwood Leflore Hospital was held at 6:30 p.m., May 5, in the dining room of the hospital as usual. Thirteen local physicians were present, and Drs. Harper and Hightower of Itta Bena. An unusually good supper was served by the nurses.

After the regular business meeting, the discussion of the two deaths that occurred during the month was taken up. The two cases reported were: Cerebral Hemorrhage in a Premature Infant at the Seventh Month, and Carbuncle of the Neck in an Old Man With Diabetes.

A film was shown illustrating the diagnosis of urological conditions.

Greenwood, W. B. Dickins,
June 2, 1938.

HOUSTON HOSPITAL STAFF MEETING

The Houston Hospital held its regular staff meeting, Thursday night, May 26, at 8:00 o'clock in the lobby of the hospital. This proved to be the largest attended and most scientific program held in several months. Birmingham doctors had complete charge of the program, and they gave a most interesting and enthusiastic program.

Preceding the program, a delightful banquet was served. During the banquet a group of musical selections was rendered by the Okolona quartette under the direction of Miss Ruth Ainsworth.

Dr. Seale Harris, Jr., Birmingham, former associate professor of medicine and chief of syphilis clinic, Vanderbilt University, gave the first paper, "Drug Reaction in Treatment of Syphilis." Following Dr. Harris, Dr. Chalmers H. Moore, neurological surgeon, Birmingham, read a paper on "Surgical Treatment of Hypertension."

Several out of town visitors were present and made short talks to the doctors.

It was decided by the entire staff that the next meeting would be held on the regular date, but would begin in the afternoon at 2:00 o'clock and continue into the night session with the program being given by New Orleans doctors. This promises to be a most interesting plan.

Houston, June 24, 1938.

KING'S DAUGHTERS HOSPITAL (Gulfport) STAFF MEETING

A meeting of the staff was held May 17 and was called to order by Dr. McWilliams. Dr. Caraway brought up a matter concerning graduate nurses doing special work at a stipulated salary when called upon to do private duty nursing. Their fee was to be turned over to the hospital authorities, whether it exceeded the amount of salary they got or not. Dr. LeBaron said that this is illegal, and that the nurse doing private duty nursing is entitled to her fee.

Dr. Smith of Bay St. Louis put in his application to the staff for recommendation to the board, as associate member of the Hospital Staff. Before action can be taken on this, however, we will have to see that he is a member in good standing in the County Medical Society.

Dr. McWilliams was re-elected president of the staff, Dr. Wallace Sheely, vice-president, and Dr. Hewes, secretary.

A report from a special committee investigating orthopedic appliances, of which Pass Christian Rotary Club was donor was given, and authority was given by the staff to purchase the articles recommended by the special committee. These appliances are to be stamped Pass Christian Rotary Club. Before turning over these appliances to the hospital by the staff, it was recommended that a fracture room be set aside. Each appliance is to have a certain rack and before an appliance can be removed from the fracture room, patient's name, doctor's name and date shall be had and placed in the space vacated by the appliance.

It was brought to the attention of the staff that some of the members were negligent in writing up their charts, and that this must be corrected if our hospital is to maintain its standing.

A case of generalized peritonitis following a hysterectomy was presented by Dr. Snelling. The patient was a white female, 43 years of age. She had been complaining of backache, pain in the left side, metorrhagia and vaginal discharge. These symptoms had gotten progressively worse over a period of three years. She also had a cancer phobia.

Past History: She had an appendectomy in 1926 with a very stormy convalesence. She later had three cystoscopies for renal colic. She had three pregnancies which were complicated by profuse hemorrhage, almost to the point of death.

Positive Findings in Physical Examination: There was an umbilical hernia and a diathesis recti. Bimanual pelvic examination revealed a prolapsed uterus, rectocele and cystocele and a lacerated cervix. Laboratory findings were essentially negative.

Operation: At operation the uterus was larger than normal and contained a fibroid the size of a walnut; both tubes were chronically injected. A complete pan-hysterectomy was done and catheter drain was put in the stump of the vaginal canal, and an umbilical hernia was repaired.

Course in Hospital: Following operation patient persisted in having fever, which ranged from 103, occasionally dropping to 100. Fever came on in eighteen hours after operation. She was treated as a case of peritonitis with Fowler's position, had tent and continuous venoclysis, decompression by means of Wangensteen tube and morphia. Pitressin was also used at intervals which gave some temporary relief of distension. She died the twelfth postoperative day.

Autopsy Findings: Autopsy revealed a generalized peritonitis with a generalized distension of the abdomen. Dr. Snelling attributes the infection to bringing out the cervix through the peritoneal cavity.

Dr. C. A. Sheely discussed the case, commenting on the development in the treating of ileus and generalized peritonitis. In the ileus he believes strychnine is the only drug of value.

Dr. Parker presented a patient whom he had in the hospital. The child had headaches for three or four weeks; temperature had been almost normal; pulse varied from 80 to 50. Neurological examination revealed no localized symptoms, however, he did not have a bilateral choked disc. Laboratory work showed pus cells in the urine. WBC 6,900. Spinal fluid was clear. This case was discussed by Dr Rouse and Dr. Lake.

Doctors present: Parker, Lake, Caraway, W. P. Sheely, C. A. Sheely, LeBaron, Rouse, McWilliams, Stevens, Snelling and Hewes.

Gulfport, Archibald C. Hewes,
June 7, 1938. Secretary.

KING'S DAUGHTERS HOSPITAL
YAZOO CITY

Dr. and Mrs. Carl Day are expected to return within the next few days from a six weeks' stay in Atlanta, Georgia and New York where Dr. Day has been taking postgraduate work.

Mrs. A. A. Aden, wife of Dr. A. A. Aden of Yazoo City is visiting relatives for the next few weeks in Virginia.

The regular monthly meeting of the staff of King's Daughters Hospital will be held Monday, June 6, at 7:30 p. m.

Dr. J. T. Rainer is spending a few days in New Orleans.

The work of painting the King's Daughters Hospital has just been completed and adds much to the appearance of the town.

Yazoo City, Roberta Prewett, R. N.,
June 4, 1938. Superintendent

VICKSBURG HOSPITAL STAFF MEETING

1. The meeting was called to order Thursday, May 12, at 7:00 p. m. by the president, with the regular members of the medical staff in attendance Drs. Boyd Edwards of Edwards, J. C. Henthorne of Jackson, and Milden of the Vicksburg Charity Hospital also attended.

2. The work of the various departments for the preceding month was reviewed, all cases of mortality were discussed and routine business was transacted.

3. The following scientific program was presented:

Carcinoma of the Stomach: Case Report.—Dr. B. C. Brownson. Discussion: Dr. W. H. Parsons.

Differential Diagnosis of Concurrent Multiple Epitheliomas and Luetic Gummas.—Dr. James L. Hall.

Discussions of Recent Literature.—Staff.

Demonstration of X-Ray Films.

4. The meeting was adjourned and supper was served.

Vicksburg, May 30, 1938.

MISSISSIPPI BAPTIST HOSPITALL STAFF MEETING

The meeting convened Tuesday, May 17, in the dining room of the hospital where dinner was served to the staff members and their guests. There were about sixty present at the meeting. At the conclusion of dinner, Dr. Temple Ainsworth, staff president, welcomed all visitors.

Among the visitors the staff was honored to have Dr. Loch S. Merriwether of the Mayo Clinic. Dr. Ainsworth requested Dr. Henthorn to introduce Dr. Merriwether who briefly discussed sinus thrombosis and related conditions with emphasis on diagnosis and treatment.

Case Reports:

"Septicemia With Questionable Septic Sinus Thrombosis," by Dr. Van Dyke Hagaman.

"Strange Coincidences," two case reports by Dr H. R. Shands.

Motion Pictures:

"Subtotal Gastrectomy," from the Lahey Clinic.

"Total Colectomy," from the Lahey Clinic.

M. Brister Ware, Secretary.

CASE REPORT

During January, 1938, a little white boy, age four, was admitted to the Baptist Hospital desperately ill with: (1) Bilateral otitis media (purulent); (2) Bilateral mastoiditis (streptococcic); (3) Questionable septic sinus thrombosis; (4) Septicemia (positive hemolytic streptococcic blood culture); (5) Endocarditis; (6) Arthritis.

Before any surgery was attempted the boy was saturated with prontylin and given intravenous glucose and therapy. Both mastoids were operated upon and showed perisinus abscesses. There were considerable purulent granulations and some necrotic areas over the left sinus which looked very suspicious of a sinus thrombosis. The sinus was not opened, however, and the jugular vein was not ligated. As a matter of fact, it seemed the little boy would die before we could even finish the mastoid operations without doing anything further to him.

Subsequent to operating he continued to get prontylin and intravenous therapy. In addition he was given blood transfusions.

Operating upon these mastoids, of course, removed the primary focus, but credit unquestionably goes to the prontylin. I feel reasonably sure this boy had a septic sinus thrombosis in the left sinus and that it cleared along with septicemia This would certainly make the use of prontylin in such cases very important, and it would seem better to saturate the patient even before surgery.

Two weeks after admission he was discharged from the hospital very much improved and today is well.

—Dr. Van Dyke Hagaman.

STRANGE COINCIDENCES

Report of the Case of Squamous Cell Carcinoma in a Patient Twenty Years of Age.— This is a lady just entering her twentieth year, who came to the office for a routine examination on account of being pregnant. When she disrobed in the office for this routine examination, she noticed for the first time a little bloody vaginal discharge. On examination it was found that she had a small papillomatous growth on the posterior lip of the cervix, not in the os. She was also two and one-half months pregnant. No examination other than an inspection and very slight palpation was made. This papillomatous growth aroused the suspicion of malignancy. The patient spontaneously aborted the next day. We had planned to do a biopsy on the cervix two days later. On account of the abortion it was necessary to postpone the biopsy for two weeks. After two weeks, on examination the growth on the posterior lip of the cervix had become as large as a nickel, and clinically presented marked evidence of malignancy. A biopsy was performed, Dr. Henthorne reported grade 4 carcinoma. She was given very intense radium treatment which will be continued. Kelly's gynecology reports no case of carcinoma of the cervix in a patient younger than twenty-three years. Graves, in his book, states that he has not seen a case younger than twenty-five. The strange coincidence was the spontaneous occurrence of abortion at a time when it was urgently necessary for it to occur if this patient were to be given the proper treatment for a very early and a very malignant cancer.

Case No. 2. Twenty years ago when I was doing the work for the Baptist Orphanage, a child was brought in on Friday for repair of the cleft palate. This child was deformed in that he had practically no neck, his head sitting directly on his shoulders. In addition to this he had a marked cleft palate. I, at first, planned to do the operation for repair of the cleft palate on Monday. On account of the other abnormality, I became doubtful and finally decided that I would not do the operation on the child, mainly for fear that he might die under the anesthetic, from the condition which I then thought to be status lymphaticus. At that time this was the cause generally given for sudden deaths under anesthesia in children. Now I realize that much doubt exists as to whether or not there is such a pathological condition as status lymphaticus with an enlarged thymus gland which causes sudden death. Be that as it may, I decided not to operate and stated as my reason that I felt the child would die during the operation from the anesthesia. The superintendent of the hospital, Miss Stamps, notified the superintendent of the Orphanage, Dr. Carter, to come for the child. The operation had been set for nine a. m. on Monday. Dr. Carter came for the child, and he and Miss Stamps went to the child's bed to get him to take him back to the Orphanage shortly after nine a. m. They found him lying dead in bed. No medicine or any other treatment whatsoever had been given this child.

Surely this was a strange coincidence, and rather a merciful dispensation of providence, which led me not to operate on this child just at that time.

—H. R. Shands

ABSTRACT: CASE REPORT: CARCINOMA OF THE STOMACH

Bradley C. Brownson, M.D., Vicksburg

The patient, a white male, 65 years of age, registered at the Vicksburg Hospital May 1, 1938.

Two weeks prior to admission marked constipation had developed and even large doses of cathartics failed to give relief. Finally, five days after such attempts at purgation were without success, an enema was resorted to and a large bowel movement, consisting of black, tarry, foul-smelling material was expelled. Not until five days later did another bowel action occur and then only after the above sequence was repeated. A simialr episode occurred about one year ago, except on that occasion the stools were not tarry The patient said that throughout his entire life a spontaneous bowel movement had occurred only at intervals of severa days and that a laxative had been taken about each two weeks.

A detailed history of the systems was entirely negative except that the patient complained of marked weakness, of easy fatigability and of pallor of one month's duration. Until two weeks ago, he had been actively engaged in his usual occupation as a carpenter and worked from eight to ten hours daily.

Also throughout his entire life and until the day of admission to the hospital, the appetite had been ravenous and there had been not the slightest semblance of dyspepsia. As a matter of fact, on the night prior to admission a generous supper was eaten and enjoyed.

The patient's past history was not pertinent to his present condition. Bilateral glaucoma existed and several minor accidents had occurred. There had been no major illnesses and he had not been formerly hospitalized.

The family history was likewise not remarkable and was specifically negative for malignancy.

Physical examination revealed a small statured white male, of advanced middle age, ambulatory but weak and very pale.

Examination by regions was entirely negative. Neither abdominal nor intrarectal masses were felt and the liver was not palpable.

Laboratory studies showed the total erythrocyte count below 2,000,000 and the hemoglobin was 40% (Sahli). Bood chemistry and renal function tests were normal.

The history of marked obstipation strongly suggested a lesion of the left colon, but the marked anemia indicated that the lesion was either of the right colon or of the stomach. Sigmoidoscopic studies and examination of the colon following barium enemas showed the large bowel to be entirely normal. It, therefore, was felt, in view of the presence of a profound anemia with melena, that in all probability carcinoma of the stomach was present. Gastric analysis showed an absence of free hydrochloric acid and the presence of gross and chemical blood. Fluoroscopic examination of the stomach showed a large filling defect at the pylorus, which was felt by the roentgenologist to be operable.

The patient was prepared for surgery in the usual fashion. He was given multiple small blood transfusions; the stomach was repeatedly lavaged with hot saline solution and sodium chloride and glucose were given intravenously. At the end of five days, surgery was performed by Dr. Parsons

A huge growth at the pylorus was demonstrated, there were many enlarged glands in the gastrohepatic and gastrocolic omenta. The glands were particularly marked along the lesser curvature and were felt down to the origin of the left gastric artery at the celiac axis. The growth was very firmly adherent to the pancreas and it was felt that cure likely would not be obtained. Nonetheless resection of four-fifths of the stomach, including the entire lesser curvature, was accomplished, though with some technical difficulty. It was necessary to shave away a portion of the pancreas and the duodenum was divided at so low a level that closure of the distal stump was done with difficulty. It was ultimately accomplished and re-inforced by tabs of omentum. The main vessels were ligatured with silk and continuity of the gastro-intestinal tract was established by anastomosing the end of the stomach that remained to the side of the jejunum, retrocolic. The peritoneum was closed with a running suture, the abdominal wall with through and through interrupted silk sutures.

The usual postoperative care, consisting of multiple transfusions and adequate intravenous fluids was given. A Levin tube was left in place without suction. The patient had for many days a very persistent hiccough, which was treated by inhalations of carbon dioxide and opiates.

Fifteen days postoperatively the patient was taking a soft diet without difficulty and doing well except for a small abscess at the upper end of the wound. At no time was there the slightest indication of a duodenal fistula.

Biopsy showed an adenocarcinoma of the stomach, grade III, with glandular involvement,

This patient is presented because of the interesting clinical picture which suggested a malignancy of the left colon or cecum, but finally proved to be carcinoma of the stomach. Also of interest is the fact that in this as well as in many instances roentgenologic determination of the operability of a gastric growth is difficult, if not impossible. Occasionally an extensive gastric growth resection is quite worth while even though there is scant hope of freedom from recurrence.

Discussion by Dr. Parsons: Dr. Brownson has discussed the salient features of this particular patient's difficulty. Certainly any individual more than forty years of age who has symptoms referable to the gastro-intestinal tract should be promptly submitted to roengenologic study. Only in this fashion will reasonably early cases of malignancy be found. In this

Clinic, at least fifty per cent of the patients presenting themselves with carcinoma of the stomach are inoperable at the time they arrive here. In malignancy of the stomach the roentgenologic study takes precedence over every other examination. The roentgnologist, however, is not able always to say if a growth is or is not operable. If definite metastases are not demonstrable, and even occasionally though they may be, exploration is indicated. At surgery if resection can be done without too prohibitive a mortality it is the only operation which offers any hope of cure and no procedure short of resection affords great palliation.

VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Friday, June 10, and after a supper served at 6:30 P. M., was called to order by the president, Dr. Leon S. Lippincott, with fourteen members and two guests present.

Reports from the Records Department and Analysis of the Work of the Hospital.

SPECIAL CASE REPORTS:

(1) Ureteral Calculus with Unusual Symptamotology.- Dr. A. Street

(2) Peritonitis of Unknown Etiology.- Dr J. A. K. Birchett, Jr. Discussed by Drs. Geo. Street, A Street, and G. C. Jarratt.

(3) Placenta Praevia—With Recovery.—Dr. R A. Street, Jr. Discussed by Drs. Geo. Street, A Street, L. S Lippincott and J. A K. Birchett, Jr.

DEMONSTRATION OF SELECTED ROENTGEN RAY STUDIES: Fracture of Vault of Skull; Fracture of Right Hip; Pulmonary Tuberculosis; Cholelithiasis (Two Cases); Right Ureteral Calculus.

THREE-MINUTE REPORTS OF THE LITERATURE OF THE MONTH:

Dr. S. W. Johnston.- Anterior Pituitary Extract and Results Obtained.

The next meeting of the staff will be held on Monday, July 11.

ABSTRACT: PERITONITIS OF UNKNOWN ETIOLOGY

J. A. K. Birchett, Jr., M.D.

Patient.—White, female, age 43, married; three children.

Chief Complaint.—Abdominal pain, nausea and vomiting.

History of Present Complaint.—Twelve hours ago, this pain began as a sudden epigastric distress, with pain over the entire upper abdomen and in the region of the gallbladder. At first, there was intense nausea and later vomiting. Pain was of a continuous type and the surface of the abdomen was so tender that she was unable to bear any weight whatsoever. She said that there was much gaseous distension and, although she took soda, that she was unable to get any relief. Several enemas were given without any perceptible benefit and with only the passage of a slight amount of gas. Several hypos were necessarily given for the relief of the pain. The vomitus was extremely bitter and there was a sensation of burning in the substernal region immediately following vomiting.

Past History.—Usual childhood diseases. Had pelvic operation several years ago. Has been habitual sufferer from constipation. There is no history of any previous respiratory infection or disease, or of cardiovascular disturbance. Suffers occasionally with indigestion and gaseous distension, particularly after eating a heavy meal which consists of excess of fried fat. Menstrual history not remarkable. No vaginal discharge. No genito-urinary disturbance.

Physical Examination.—Middle aged, well-nourished and developed white female, apparently acutely ill Temperature on admission was 99-4/5°F, pulse rate 94, blood pressure, systolic 110, disastolic 76, respiration 20. The general examination is essentially negative, except for abdominal findings suggestive of acute intraperitoneal lesion. There was evidence of marked distension and patient was tender over the whole upper abdomen with rigidity of the right rectus muscle. No peristaltic waves were visible, but there was marked tympany and the least pressure caused acute pain.

Laboratory Examinations.—Blood: leukocytes, 16,800; differential count, small lymphocytes, 13; large lymphocytes, 3½; neutrophils, mature, 39½, band forms, 44. Urine: essentially negative; no pus; numerous leukocytes, few bacilli; no sugar; no albumin, no casts.

Procedure.—On admission, a tentative diagnosis was made of acute gallbladder disease. Patient was given glucose solution intravenously and morphine for pain. The second day, the distension became progressively worse and pain became more severe and of a rhythmic type. As we were unable to obtain any results from enema or irrigation of the lower bowel, and as there was the appearance of a brownish, slightly stercoraceous material from the duodenal tube which had been placed in the stomach, it was thought that we were possibly dealing with an intestinal obstruction. The patient had had a previous laparotomy some years ago, and there was considerable pain in the region of the upper end of this scar. An x-ray study for fluid levels was doubtful as to their presence. However, as the patient was apparently getting rapidly worse, it was advisable to do an exploratory for relief of a possible obstruction. Therefore, an exploratory procedure was done. Under cyclopropane anaesthesia, a long right rectus incision was done through the site of the previous abdominal scar. There was considerable serous fluid in the peritoneal cavity and the peritoneum was injected and showed evidence of acute irritation. All the terminal ileum was distended and this was traced to the ileocecal junction. There was marked distension of the cecum, but there was no obstruction in the region of the ileocecal valve. The ascending colon was followed upward and was also markedly distended. As the hepatic flexure of the colon was reached, it was firmly fixed to the parietal peritoneum by a thick fibrous band anterior to the liver, and this band, which had formed, was apparently the site of obstruction. When this band was separated, there was immediate passage of gas into the transverse and descending colon, which were not distended prior to this time. As this band was separated and the transverse colon packed away so that the structures of the upper abdoman could be inspected, there was a gush of several ounces of milky fluid which had formed between the parietal peritoneum and the superior surfaces of the liver, and along the falciform ligament there was evidence of a white fibrinous exudate. At this juncture, a culture of the peritoneal fluid was taken and the area of the icing-like exudate was removed from the surface of the liver for laboratory examination. The under-surface of the liver was normal, the gallbladder was normal in every respect, being small, of normal color, not thickened, no stones, and no evidence of any glands. The duodenum and pyloric region were plastered with the same type of exudate. As the stomach was markedly distended, a stomach tube was passed into it, removing the gas, and when this was done the pancreas was readily palpated. It was apparently slightly enlarged, but was otherwise negative. The stomach and duodenum were carefully inspected for evidence of perforation or lesion which had not been identified, the upper peritoneal cavity in the region of the duodenum and gallbladder was drained by the insertion of ten rahfis gross drains which held the peritoneal cavity well open to facilitate drainage and protected the upper surface of the liver and the duodenum from having coils of small bowel and the colon from coming in contact with the area which was covered with the plastic exudate. A diagnosis was made of acute peritonitis of unknown origin, associated with secondary obstruction due to newly formed adhesive bands with constriction of the hepatic flexure The patient was in a moderate degree of shock when the abdomen was closed. She was given stimulative treatment and glucose solution was administered.

Patient had a rather stormy convalescence for the first four of five days, fever being as high as 103°F on the third postoperative day and continuing as high as 102°F on the fifth postoperative day when it dropped to 100°F and remained below this until her discharge. The peritoneal drainage was profuse. With the aid of the duodenal tube, the upper abdomen was kept flat and pitressin, 8 minim doses, every six hours with the colon irrigation, gave prompt response from the lower bowel. On the fifth day there was a tendency to open distension with the suggestion of an ileus, and 20 c.c. of 10% sodium chloride solution was given with the glucose solution with relief of the distension. On the morning of the sixth postoperative day, patient began to complain of pain in the right side of the neck and developed a marked parotitis. After that the patient made a rather uneventful convalescence. All tube drains were out on the fifteenth day with little or no peritoneal drainage. On the 16th day, patient was up in a chair and was discharged on the 20th postoperative day, her general condition being quite satisfactory.

Comment: This case is of noteworthy interest because of the fact that we were unable to find a definite etiologic factor in a case with such widespread peritoneal involvement and systemic reaction. The cultures which were taken from the peritoneum at the time of operation were negative, that is, in not showing any growth of any organism as being responsible for the peritonitis. Careful investigation of all intra-abdominal viscera during the time of operation failed to reveal any possible source, that is, no history of trauma, and no evidence of any acute inflammatory process in any of the organs, either abdominal or pelvic. Patient made a phenomenal recovery following exploratory laparotomy with wide and extensive drainage. In this type of case, we feel that this is the best surgical measure to be used.

HONOR ROLL

The following have contributed to the Mississippi State Medical Association section of THE MISSISSIPPI DOCTOR this month.

County Editors: DeSoto County, L. L. Minor; Humphreys County, J. W. Jackson; Leflore County, W. B. Dickins; Washington County, J. A. Beals; Winston County, M. L. Montgomery. —5.

Societies: Central, L. W. Long; Coahoma County, N. C. Knight; Issaquena-Sharkey-Warren Counties.—3.

Interpreting Medical Literature: A. Street, Harvey F. Garrison, J. A. Beals, Temple Ainsworth, Laurance J. Clark, Alston Callahan.—6.

Hospitals: Clarksdale Hospital, N. C. Knight; Greenwood Leflore Hospital, W. B. Dickins; Houston Hospital; King's Daughters Hospital, Gulfport, Archibald C. Hewes; King's Daughters Hospital, Yazoo City, Roberta Prewett; Mississippi Baptist Hospital, M. Brister Ware; Vicksburg Hospital; Vicksburg Sanitarium.—8.

Others: Percy Wall, Frank Hagaman, Felix J. Underwood, A. L. Emerson.—4.

Grand Total.—26.

Your editors thank you.

WOMAN'S AUXILIARY

TO THE MISSISSIPPI STATE MEDICAL ASS'N

President.. ....Mrs. John B. Howell
Canton
President-elect ....Mrs. Hugh Johnston, Jr.
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1st Vice President...... ....Mrs. C. C. Hightower
Hattiesburg
2nd Vice President..............Mrs. Henry Boswell
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4th Vice President.. ....Mrs. Temple Ainsworth
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Recording Secretary................Mrs. H. C. Ricks
Jackson
Treasurer... ... . Mrs. J. D. Simmons
Cleveland .. ..
Parliamentarian ....Mrs. F. E. Rehfeldt
Jackson

Councilors: 1st district, Mrs. T. G. Hughes, Clarksdale; 2nd district, Mrs. C. M. Roberts, New Albany, 3rd district, Mrs. W. L. Orr, Fulton; 4th district, to be appointed; 5th district, Mrs. L. H. Clark, Vicksburg; 6th district, to be appointed; 7th district, Mrs. L. L. Polk, Purvis; 8th district, Mrs. W. K. Stowers, Natchez; 9th district, Mrs. D. J. Williams, Gulfport.

High Lights of the A. M. A. Auxiliary Convention

As it is almost a year until our annual meeting when I may give you a report of the meeting of the A. M. A. Auxiliary which met in San Francisco in June, I will try to give you a brief outline of the meeting through the Auxiliary page of THE MISSISSIPPI DOCTOR.

I was most happy to serve as your delegate from Mississippi and enjoyed the meeting very much.

San Francisco being so far removed from the denser populated areas the attendance was not so large as at some of the other meetings but several good points for Auxiliary work was brought out which will be given through these columns from time to time.

Of special interest were the exhibits of work by various states and auxiliaries and I hope Mississippi will have such an exhibit next year.

The loving cup for the greatest percentage in membership was awarded to a Southern state.

Of the many social features one had to make a choice for it was impossible to attend them all. I enjoyed most the trip through the city. This trip led through Golden Gate Park, Japanese Tea Gardens, Fleishbacker Pool and the zoo, along the Pacific shores and on to Fisherman's wharf; then through China town, with its quaint oriental buildings and customs, which is without doubt the most fascinating among the attractions of cosmopolitan San Francisco, and it is even more picturesque after nightfall with its yellow lights.

Some of the other entertainment features were held at various clubs and medical centers thus giving several trips to points of interest which, taken all together, made a most enjoyable convention.

Mrs. Harvey F. Garrison

:o:

Picnic At Tupelo

One of the nicest affairs given recently was the picnic June 30, when the Four-County Auxiliary of doctors wives entertained their husbands with a picnic. The lunch was spread on the beautiful hospital grounds and a happy evening was spent by the professional men and their wives of the four counties.

The tables fairly groaned with food prepared by the ladies and Miss Helen Branham had iced drinks and coffee for them to make the supper perfect.

A feature of the entertainment was a poem, "Medicine Fifty Years Ago," which was written by Dr. Branham. It was read by Miss Branham. It was both clever and entertaining.

Every Tupelo doctor was present and Prentiss, Pontotoc, and Itawamba counties were well represented. It was a most enjoyable affair and will probably be repeated during the summer.

:o:

Miscellaneous Happenings

These summer months seem to be rushing past with very little activity of the various auxiliaries as most of them hold no meetings until September or October.

Mrs. John Howell and Mrs. N. C. Womack visited the Vicksburg Auxiliary at their last meeting for the summer and reported a most delightful visit with the ladies of the Hill City.

The auxiliary at Natchez sent a report of their meeting in the home of Mrs. W. K. Stowers. After the usual business meeting and the report of the State Convention delicious refreshments were served in the dining room. An arrangement of varigated hydrangeas centered the tea table between dainty settings of crystal and china, making a most attractive table arrangement.

The May meeting of Central Auxiliary was held in the home of Mrs. F. E. Rehfeldt with Mrs. Dudley Jones, Mrs. Welch, and Mrs. H. P. Ricks co-hostesses. Mrs. John Howell, a member of Central Auxiliary, was introduced as our new state president, and outlined the proposed work for the year. She gave an enthusiastic talk and some definite objectives to be accomplished this year.

Mrs. T. E. Wilson, president, then presented Mrs. N. C. Womack, Central's new president, who made a most inspiring talk on the possibilities of the work as outlined for the year.

Some of your other officers have been too busy getting plans in shape for fall meetings to contribute to the auxiliary pages of last month's Journal.

Mrs. Howell has been very busy with details which could not be finished in so short a time at the convention, and which have necessitated writing many letters. But she is planning some interesting things to begin in September or October.

This is the time of year when Mrs. Hightower is working over the year book while some of the rest of us are going to cooler climes or at least sitting on the porches with the fans nearby.

Mrs. Pool is getting ready for the Preventorium Essay Contest to be put on early in the fall, in October if possible.

Dr. and Mrs. Howell journeyed to Nashville in June for the graduation from medical school of John Jr.

(Continued on page xix)

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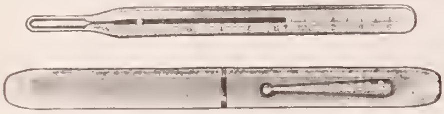

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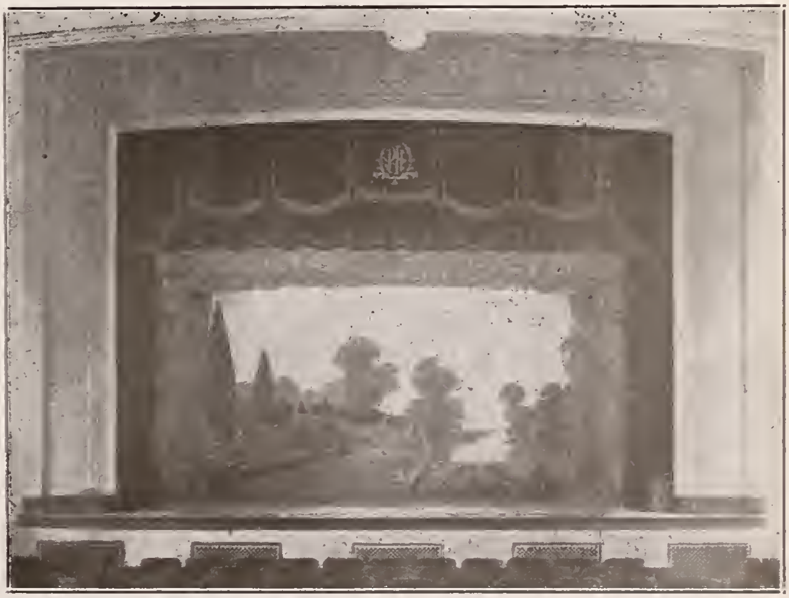

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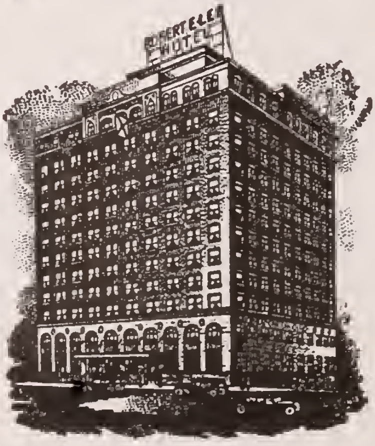

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WOMAN'S AUXILIARY

(Continued from page 75)

Dr. and Mrs. Harvey F. Garrison and son Wick, report a most enjoyable trip by motor to the A .M. A. convention in San Francisco.

The Van Alstine family are vacationing in Canada this month and enjoying the cool lake breezes and the fishing on Bay Quinte.

Mrs. F. L. Van Alstine.

:o:

Northeast Mississippi Thirteen-County Medical Auxiliary

The members of the Northeast Mississippi Thirteen-County Medical Auxiliary met June 21 in one of the clubrooms of the handsome Tishomingo Park lodge. Mrs. L. L. McDougal, the president, called the meeting to order and introduced Dr. Paul Haney of McComb, who brought the auxiliary an important address on child health problems.

A number of visitors were welcomed, along with the following new members: Mrs. D. D. Johnson, Belmont, Mrs. N. C. Waldrup, Tishomingo, Mrs. Montgomery, Burnsville, Mrs. M. Cromeans, Belmont, Mrs. K. F. McRae, Belmont, Mrs. Bailis, Tishomingo and Mrs. R. J. Brown, Iuka.

Reports from the state meeting in Jackson were given by Mrs. W. H. Cleveland of Tupelo and Mrs. Anderson of Booneville. Mrs. Cleveland also explained the special $100.00 goal adopted by the Four-County Unit and suggested possible projects for the auxiliary to sponsor.

After refreshing drinks provided by Dr. N. Waldrup, the ladies adjourned for a sightseeing trip around the park.

:o:

Four-County Unit Meeting

About thirty members of the Four-County Unit to the Thirteen-County Auxiliary were present for the June meeting at the Community Hospital in Tupelo. Miss Helen Branham and Miss Stuart were hostesses, assisted by the nursing staff of the hospital.

Mrs. John Rayburn of Pontotoc, president of the unit, opened the business session with a discussion of a project for the group to sponsor. After a general discussion it was agreed that a goal, called the Hundred Dollar Fund would be accepted annually by the ladies of this auxiliary, the fund to be applied to relief of aged or dependent doctors' wives, child welfare or some other worthy cause related to the profession.

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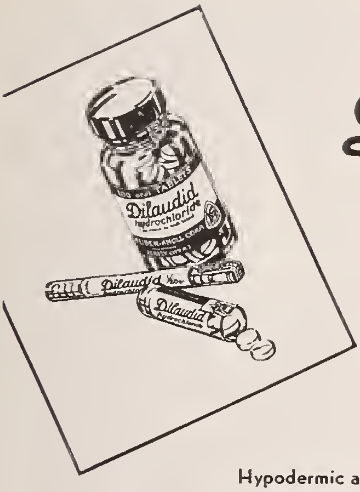

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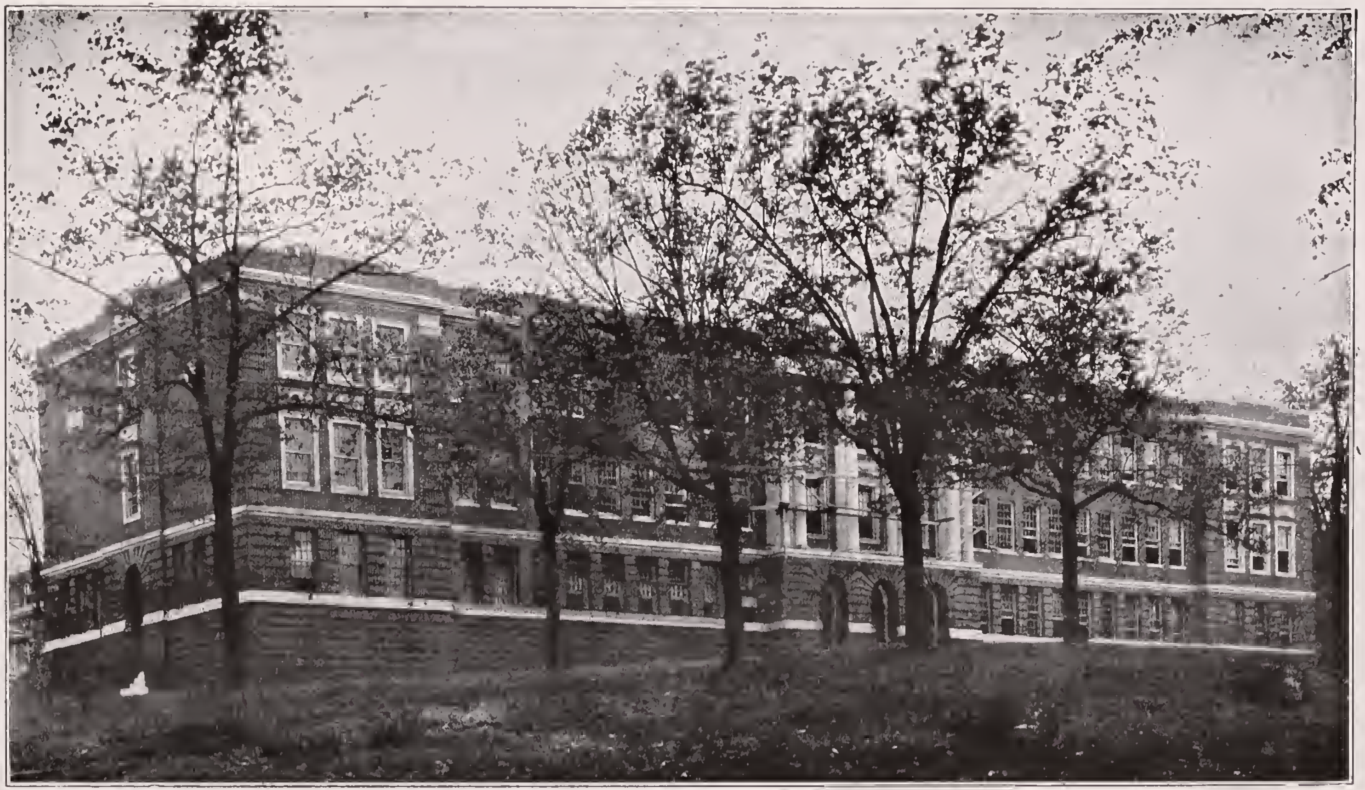

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EARTH'S COMMON THINGS

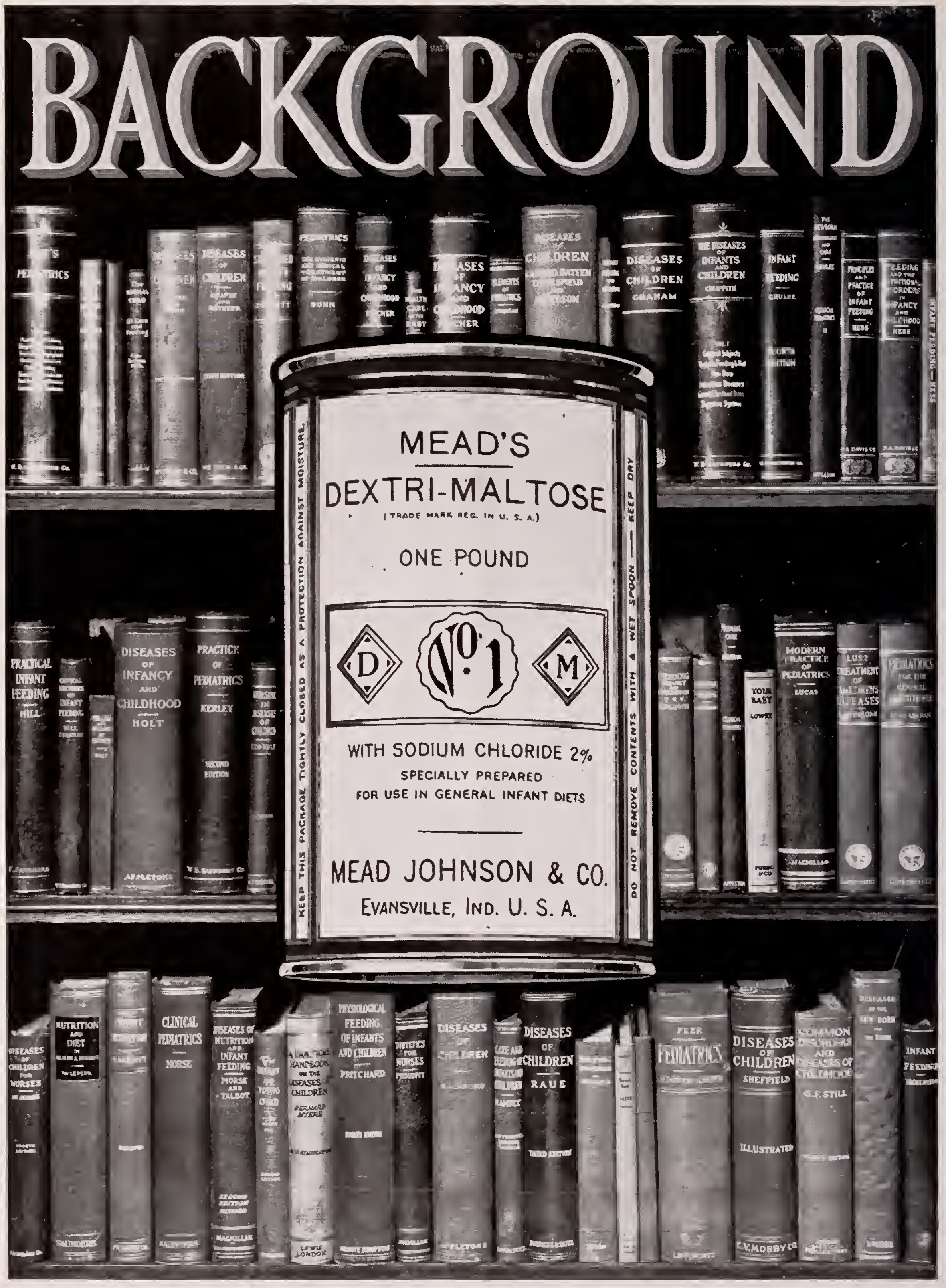
SEEK not afar for beauty. Lo! it glows
In dew-wet grasses all about thy feet;
In birds, in sunshine, childish faces sweet,
In stars and mountain summits topped with snows.

Go not abroad for happiness. For see
It is a flower that blossoms at thy door!
Bring love and justice home, and then no more
Thou'lt wonder in what dwelling joy may be.

Dream not of noble service elsewhere wrought;
The simple duty that awaits thy hand
Is God's voice uttering a divine command,
Life's common deeds build all that saints have thought.

In wonder-workings, or some bush aflame,
Men look for God and fancy Him concealed;
But in earth's common things He stands revealed
While grass and flowers and stars spell out His name.

—MINOT J. SAVAGE.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Recent Advancements in our Knowledge of the Pathogenesis of Renal Calculus*

HUGH CABOT, M.D.
The Division of Surgery, The Mayo Clinic
ROCHESTER, MINNESOTA

IN ALL DISCUSSIONS of the fundamental proplem of stone formation, it is essential to keep constantly before our minds the fact that the crux of the problem lies in the formation of the nucleus. This nucleus may be quite microscopic but, without a nucleus, no stone will form. With a nucleus, stones of a size capable of producing clinical symptoms may or may not form. Given a nucleus, the development of stone of clinical proportions depends upon the protection given that nucleus by anatomic conditions. Thus, if a nucleus forms in such a position in the urinary tract that it is exposed constantly to the expulsive forces, whether of the calix, renal pelvis, or bladder, such a nucleus may never survive to reach clinical proportions and neither patient nor physician will be aware that there is some abnormality capable of initiating stone formation. On the other hand, if a stone forms in some sheltered nook in the urinary tract, no matter what its primary chemical composition may be, it will continue to grow by accretion and requires no pathologic condition for its growth. These are the stones which reach clinical size, produce symptoms, and come to the attention of the physician. This is important since it is entirely arguable that a very large proportion of the human race is afflicted with conditions which not only may, but in fact do, give rise to the formation of a nucleus whereas only a relatively small proportion harbor that nucleus with resulting formation of stone of clinical dimensions.

For many years there has frequently occurred, in the literature, the classification of stones into **primary** and **secondary**. Apparently the original conception of this classification is that **primary** stones are those which form as the result of an "Act of God," whereas **secondary** stones are those which form as an "Act of Bug." Such a division seems to me, in light of modern knowledge, highly unsatisfactory and, in fact, misleading. While not prepared to deny that our knowledge is as yet insufficient to enable us to lay down dogmatically what may be the origin of stones forming in the absence of recognized infection, and while we may, therefore, still be required to regard the origin of these stones as the Act of an All-wise and Inscrutable Providence, it is by no means clear that many of the stones, which have in the past been classified as primary, that is to say not associated with infection, may not, in fact, be the definite result of bacterial invasion of the tissues. The work of Hellstrom, and more recently of Randall[11], — the former dealing with stones the nucleus of which contains staphylococci, the latter with lesions of the renal papilla not showing evidence of inflammatory origin,—strongly suggests that infection may touch the kidney so lightly as to be undetected and perhaps undetectable by our present methods of examination. It is true that there is a group of stones in which infection is quite clearly an essential factor, perhaps of their origin, and certainly of their development, but to dignify these as a group apart is to overlook the more ultimate and intricate problems of stone formation.

HISTORICAL CONSIDERATION

A lengthy discourse upon the history of this problem would be inappropriate here. However, there are some interesting shifts in the frequency and the locus of stone formation that we cannot properly overlook. For instance, examination of the records of some of the great hospitals in England and in France discloses the interesting facts that, one hundred years ago, and even more recently, stone in the bladder was common and stone in the kidney was uncommon, stone in children was frequent, stone in adults was less frequent. Today the position is precisely reversed. Stone is essentially, though not exclusively, a disease of adult life and renal calculi are immensely more common than vesical calculi. At the present time, in certain provinces of India and certain regions in China, the situation in regard to the incidence of stone formation is substantially similar to that which existed in England and continental Europe a century ago. In India and China, stone is common in children, and is much more common in the bladder than in the kidney. Now this suggests that there were some fundamental conditions which operated in Europe a century ago, and even as recently as fifty years ago, which have disappeared. It further suggests that the conditions now operating in India and China have some kinship to the conditions operating in Europe at an earlier time.

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*Read before the Mid-South Post-Graduate Medical Assembly, Memphis, Tennessee, Feb. 15, 1938.

As far as I am aware, there has been no study made in this country tending to show whether the conditions here have undergone the same shift. However, it is within my knowledge that, in the last forty years, stone in the bladder has become less common while stone in the kidney appears to have become more common and is certainly more recognized.

VARIOUS THEORIES OF STONE FORMATION

I do not propose to burden you with an exhaustive or even an extended discussion of the various theories which have been advanced to explain stone formation. Some of them have lost much of their validity, while others appear to have grown in stature. I would, however, point out to you that there is still relatively little fundamental knowledge in this field. Most of the theories put forward to explain stone formation are nothing more than attractive working hypotheses. As the result of this, we frequently get trapped and find that some theory, which has seemed to us competent to explain many of the phenomena of stone formation, has had the ground cut from under it by some recently observed fact, commonly in the field of biologic chemistry. We should therefore, I think, maintain an attitude characterized by the late Charles W. Eliot as one of "abiding skepticism" though also exhibiting cordiality to new discoveries in the field. I believe it is true that at the present time the fundamental problem is still unsolved. Modern science has brought forward a number of interesting hypotheses which undoubtedly explain some of the phenomena, but there remains always a factor which we do not explain. For instance, infection is undoubtedly the decisive factor in the formation of stone in some patients. On the other hand, the same infection apparently producing a similar lesion is notoriously incapable of producing stone in other patients. In short, there is here an unknown factor, which we may designate as X, of the nature of which we are still unaware. Coming now to the more attractive, and perchance important, working hypotheses, let us explore the following:

Vitamin A Deficiency.—As early as 1917 Osborne, Mendel and Ferry showed clearly that deprivation of vitamin A in certain animals would produce stone formation. This work was confirmed by various observers, particularly by McCarrison in 1931 and, most recently, by Higgins in 1936. Interestingly and importantly enough, the calculi thus produced are habitually those of calcium phosphate, and it may be noted in passing that they more commonly develop in the bladder than in the kidney. This proportion of vesical, as compared with renal, calculi closely parallels that observed in the present day in India and in China and, one hundred years ago, in Europe. The importance of this observation is somewhat limited by the fact that, in order to produce these calculi, vitamin A deprivation must be carried to the point of producing keratinization of the epithelium of the urinary tract. Here at once is introduced the element of tissue necrosis which has been conclusively shown to be in and of itself an important factor in stone formation. Higgins, following the implications of his own experimental work and that of others, has put forward the suggestion that, in patients with calculi predominantly of calcium phosphate and calcium carbonate, a diet rich in vitamin A and the giving an acid ash will prevent the development of such stones and may even lead to the solution of stones already formed. This latter conclusion has failed of confirmation by other observers. Oppenheimer and Pollack were unable to confirm the observations of Higgins in regard to the disappearance of already-formed calculi of this type and our studies at The Mayo Clinic have led us to be skeptical of such an effect. It is even possible that, on such a regimen, existing calculi may increase in size rather than show the desired diminution.

Looked at from the point of view of the skeptic, it is difficult to believe that any very large proportion of the people of this country do, in fact, suffer from an important lack of vitamin A. That such conditions may exist elsewhere, the work of McCarrison suggests. The working hypothesis set up by Higgins includes not only the assumption that there is a deficiency of vitamin A but also the assumption that an acid-ash diet, by keeping the urine acid will alter the conditions of the urine and thus check this still vague tendency to stone formation. Here we are, as I think, on more solid ground. It is an observed fact that some patients, whose diet is planned in such a way as to require a high alkaline intake such as is indulged in by patients with gastric and duodenal ulcers, do tend to develop stone.

There is another interesting suggestion in this realm of diet and this concerns itself with the modern fad of lapping up quantities of fruit juices. In reason and in moderation, such indulgence is probably harmless, possibly helpful, but, under the stimulus of an unscrupulous and commercial age, there are certain portions of this country in which the intake of fruit juices has been pushed beyond the bounds of common sense. Now my very incomplete knowledge suggests to me that, in the regions where this fad holds sway, notoriously Florida and southern California, calculi, particularly in the kidney, seem to be uncommonly prevalent. I do not suggest that the iniquities of commerce have, in fact, increased the burden of the human race albeit they may have increased the income of the surgeon, but I think the phenomenon is worth consideration.

Infection.—The relation of infection to stone formation has long been known but not clearly understood, even unto the present day. The most certain relationship is between stone formation and those bacteria capable of splitting urea. Thus Hellstrom, in a series of 750 cases of renal calculi, found it possible to determine with certainty that staphylococci could be found in the nuclei of 22 per cent. I am not aware that there is any parallel study in this country and cannot, therefore, say that such a proportion would be found here. My own experience suggests to me that in this country, while staphylococci, through their area splitting habit, are undoubtedly important, consideration and perhaps equal importance should be awarded to the Proteus bacillus in its various forms. Very recently Albright[2] and coworkers have described two cases of very extensive calcium deposit in both kidneys. The urine examination showed a pure culture of Haemophilus influenzae. To this interesting process Albright and his coworkers have given the jaw-breaking name of "nephrocalcinosis" which ought to be decisive. Fortunately, this appears to be a very rare cause of infection in the urinary tract.

Infection and distant foci.—In a considerable proportion of the cases in which we must declare that urea splitting qualities are an essential factor in stone production, the bacteria appear to have affected primarily the kidney itself. However, in a still undefined proportion of the cases, the bacteria appear to be supplied, as needed, to the kidney from foci elsewhere in the body. Thus as long ago as 1921 and 1923, Rosenow and Meisser succeeded in producing stones in animals by introducing bacteria obtained from infected teeth. More recently the prostate in the male and the inflamed cervix in the female have appeared not infrequent sources of supply of staphylococci. In some cases, at least, the evidence of severe infection in the kidney of such patients is not observable. The natural history, in some cases at least, appears to be as follows: staphylococci from these foci reach the circulation and perhaps also the lymph stream. They are transported to the kidney, produce areas of infection necrosis, followed by repair and perhaps the deposit of calcium. On the lesions thus formed, calculi develop. This is probably a relatively uncommon sequence of events, but there is nothing in our present knowledge which will warrant us in declaring that it may not be at the bottom of a handsome proportion of calculi, the origin of which is today obscure.

Quite recently (1937) Randall has published observations of outstanding importance which may perhaps be very far reaching. He observed the phenomenon, long known to pathologists, of small white patches in the pelvis of the kidney, commonly upon a papilla, sometimes in the niche between the papilla and the pelvic wall. These white patches, often referred to by pathologists as "milk patches," were conclusively shown by him to be the site of calculous development. Careful study by him of a series of autopsy cases showed the whole process, beginning with the development, beneath the mucous membrane, of areas of fibrous tissue, perhaps the end result of bacterial invasion. In these areas calcium was deposited, all of the process taking place beneath the mucous membrane. These calcium deposits or plaques tended to develop, to destroy the mucous membrane covering, and to present themselves on the papilla or pelvic wall as exposed areas of calcium. At this point he clearly demonstrated the beginning of stone formation and, what is of vital importance, showed that these stones, while they might be composed of calcium phosphate, calcium carbonate, and ammonium carbonate, might also be composed of calcium oxalate and the various combinations of uric acid and urates heretofore believed to develop only in the absence of infection. Now a careful examination of the very beautiful photomicrographs of Randall, compared with the equally convincing photomicrographs of Hellstrom, shows remarkably little difference in their appearance. Both of them show scar tissue and calcium deposit. In Hellstrom's cases, the staphylococcus was conclusively demonstrated in the resulting stone. In Randall's cases it was not, and was perhaps absent. Here may well lie a very important contribution to our knowledge of the causes leading to the production of a nucleus.

Endocrine gland lesions and metabolic disturbances affecting the excretion of calcium, phosphorus, uric acid, and cystine.—In recent years our attention has been sharply called to the association of stone with diseases of the parathyroid glands. Particularly valuable work has been done by Albright, Baird, Cope, and Bloomberg. It has been clearly shown that calculous formation is frequently associated with diseases of the parathyroid glands. Thus, in a series of eighty-three cases, Albright and his associates found 27 per cent of associated renal calculi. On the other hand, disease of these glands is relatively very uncommon. In a recent investigation of 1206 cases of renal calculus at The Mayo Clinic, in only two, or 0.2 per cent, was parathyroid disease apparently associated, and in only one was abnormality of these glands demonstrated at operation. Lloyd, in a series of 10,000 consecutive autopsies, found only five cases of parathyroid tumor. Thus, the importance of renal calculus in parathyroid disease is large but the importance of parathyroid disease in the whole group of patients with renal calculi is small.

Various other rare diseases, affecting calcium metabolism and producing high values for calcium in the blood, may be associated with stone. Here perhaps belong cases of bone atrophy associated with severe fractures and long continued confinement to bed. Certain it is that, in patients having such fractures, stone formation shows an abnormally high incidence.

The association of renal calculi with gout has long been recognized and, in doubtful cases, examination of the blood for a high uric acid content should not be overlooked.

Cystine calculi are rare in the whole group of renal calculi but frequent in patients with that little understood hereditary malady of cystinuria. However, a handsome proportion of the patients with cystinuria never form calculi.

Race.—It has frequently been stated that urinary calculi, and particularly renal calculi, were relatively uncommon in the Negro race. Statistical evidence in this country has been difficult to evaluate since we have no means of knowing how many Negroes may harbor calculi of which they never complain. A recent investigation by Vermooten from South Africa is of interest. Here there is a relatively very large Negro population associated with a much smaller white population. The incidence of stone in the whites is said by Vermooten to be 1 to 460, while in the Negro it is said to be 1 to 80,000. This is an incidence too striking to be overlooked but, as he properly points out, it does not necessarily mean a racial tendency. The diet of the Negro in South Africa is low in calcium, high in acid base, and high in vitamin A. Such a diet might easily influence the incidence of stone.

Stasis.—For many years the association of calculi, whether renal or vesical, with urinary tract obstruction has been noted. There has been a tendency to regard the stasis as an etiologic factor. This does not seem to be true if we accept the view that the formation of the nucleus is the fundamental problem with which we are concerned. Obviously, in the presence of obstruction at any point in the urinary tract, stasis will operate to prevent the expulsion of the nucleus, its retention will inevitably lead to growth, and calculi of clinical proportions will result. Stasis may, therefore, be regarded as an important fact in relation to the management of calculi but not as a fundamental cause in their development.

SUMMARY AND CONCLUSIONS

1. In searching for the fundamental causes of calculous formation in the urinary tract, we should concern ourselves with the conditions which lead to the production of the nucleus.

Given a nucleus, even of microscopic size, calculus of clinical size may result.

2. The part played by lack of sufficient vitamin A and by diet is still difficult to determine. Vitamin A deficiency is perhaps an important factor in stone production in certain provinces of India and certain provinces of China. Its relation to stone formation in this country has yet to be clearly demonstrated.

3. Disease of the parathyroid glands and certain general disturbances of metabolism, resulting in gout and cystinuria, are commonly associated with stone formation where these diseases exist. On the other hand, parathyroid disease and cystinuria are uncommon or rare conditions. They can be expected to produce only a small proportion of stones coming under the observation of the physician. The same is almost equally true of gout, though I have an uneasy suspicion that gout is frequently overlooked and is a more common disease than is generally believed in this country and at this time.

4. The recent study by Vermooten of the incidence of calculi in the Negro race in South Africa suggests that this race may be importantly less liable to the disease than are whites. On the other hand, the diets of the two races in South Africa are radically different and this may turn out to be the essential factor.

5. Infection, particularly with urea splitting organisms such as staphylococci, Proteus, and others, is undoubtedly an important factor in calculous disease. Closely allied to the injury produced by these organisms, and possibly ultimately due to bacterial lesions, are the "milk patches" or "plagues" to which Randall has called attention and which constitute a satisfactory nidus for the development of stone. It is not impossible that, under this heading, may fall a considerable portion of renal and possibly vesical calculi.

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A Differential Diagnosis of Lesions of the Lower Back Producing Pain*

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ONE OF THE complaints brought most frequently to the general practitioner is that of pain in the lower part of the back. Commonly seen and well recognized as such troubles are, their accurate diagnosis and logical treatment are infrequent and difficult. The pains may arise from numerous, different structures, all of which are deeply seated and not subject to direct visual or manual examination. X-rays give valuable information concerning fractures, some stages and forms of arthritis and the productive or destructive lesions that sometimes invade bones of the pelvis and lower spine, but they furnish little or no data concerning the soft tissue structures which are more often affected. The most valuable aids in establishing a diagnosis of diseases and injuries which produce low back pain are to take a detailed history and make a thorough physical examination. Casual history-taking and superficial examination of these patients has resulted too often in unnecessary pelvic surgery on women and prolonged periods of needless fixation of spines in braces or plaster.

Back Pains of General and Visceral Origins

When a patient complains of pain in the lower part of his back it may be one of the prodromal symptoms of a generalized infection; it has origin, perhaps, in one of the pelvic or abdominal viscera; perchance it comes from lesions of the skeletal frame work or its supporting muscles and ligaments; again it may represent part of a neurosis or the effort of a malingerer to establish his claim of disability. Many infectious diseases such as typhoid fever, influenza, dengue, smallpox and infantile paralysis are ushered in with severe back pain. In these cases, however, the back complaints are soon overshadowed by malaise and fever. More difficult to differentiate and diagnose are some lesions of the central nervous system such as tabes, lateral sclerosis and spinal cord tumors. Back symptoms of visceral origin are those produced by tumors and inflammatory processes of the rectum, prostate, bladder, colon, caecum, uterus and adnexa. The commonest of all causes, perhaps, is chronic constipation.

Lesions of the Spine and Supporting Structures

The most common painful affection of the spinal muscles is fibrositis, (lumbago or muscular rheumatism). Back pain may be the result of an injury which tore or overstretched some of the spinal ligaments or muscles. Acute traumatic or infectious arthritis involving the articular facets are potent causes of back pain. Tuberculosis of the spine, osteomyelitis, bone tumors, degeneration of the intervertebral disc with herniation of the nucleus pulposus into the spinal canal will produce pain in the back. Many anomalies occur at the junction of the spine and pelvis which can be visualized by aid of the roentgen ray. The fifth lumbar transverse process on one or both sides may be elongated and impinge upon the adjacent ilium; a sacralized fifth lumbar vertebra, spina bifida, variations of the lumbosacral angle and spondylolisthesis—all of these anomalies occur much more frequently among those who complain of backache. However, the same anomalies are seen from time to time in the course of routine roentgen examinations of patients who have never had complaints referable to their backs.

Back Pains Associated with Neurosis

Patients afflicted with a psychosis or a psychoneurosis sometimes have a major complaint of backache. It is quite possible for one of these to have real cause for his complaint, and it is important to avoid the erroneous conclusion that because a patient is nervous his back trouble is purely functional. Victims of back injuries which may be compensable under the law are prone to prolong and exaggerate their complaints. Physicians generany are so well acquainted with this tendency that conscious effort is necessary to avoid prejudice. The diagnosis of "compensationitis" should never be made until every other possibility has been carefully considered and eliminated.

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*Read before the Northeast Mississippi Thirteen County Medical Society, Tishomingo State Park, Tishomingo, Miss., June 21, 1938.

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HISTORY TAKING

The patient with a back complaint should be required to locate and characterize the pain minutely, and to describe carefully any minor troubles he may have at the same time. He should indicate the location of his pain by pointing with one finger, and the examiner must bear in mind that pain of visceral origin is usually in the midline and low down over the sacrum, whereas that associated with affections of the joints and ligaments is usually referred to the involved part about one of the sacroiliac or lumbosacral joints. The reference of pain to the inguinal region or testicle suggests a lesion in the genitourinary tract; when referred to the rectum and floor of the pelvis, the prostate, uterus, base of the bladder and rectum should be considered as possible sources. On the other hand, pain in the lower back which is aggravated by bending movements and radiates down the back of the thigh and leg immediately suggests affection of the lumbosacral joints or ligaments or, perhaps, one of the sacroiliac joints. Other details concerning the pain must be elicited—its duration, whether constant or intermittent, its relation to work, rest, weather changes, and the use of supports, e.g., adhesive strips, a corset or belt, the manner in which the pain came on, and the patient's activities for twenty-four hours prior to its onset. Stiffness in the back after sitting still or lying quietly for a time, but relieved somewhat by moving about, suggests joint involvement, a traumatic or arthritic affection, whereas the sharp, catching, agonizing pain, brought on by making certain twists or turns, is more likely to be associated with lesions of the muscles or ligaments.

Unless inquiry is made by the examiner, patients with back complaints will fail to mention their foot pains and leg aches, although the conditions are often closely related, especially among women who have worn high-heeled shoes long enough to have shortened heel cords.

Those who have chronic arthritis, as evidenced by enlarged finger joints, and some who had transitory attacks of infectious arthritis from time to time, are prone to forget such complaints when relating their histories. For the same reason, careful inquiry concerning the patient's dietary habits, the functioning of his stomach, bowels, genitourinary tract, and nervous system, and the status of his teeth, tonsils and sinuses must be obtained.

PHYSICAL EXAMINATION

Too many women have been submitted to unnecessary pelvic operations to relieve a chief complaint of backache, because their examiners were too casual in their history taking and physical examination. It is impossible to make an adequate examination of a woman with low back pain while she is lying on a table draped for vaginal examination, or sitting in a chair fully clothed. Orthopedic surgeons, on the other hand, are sometimes guilty of bracing or operating on spines that could have been relieved better by treatment of the prostate or fallopian tubes. To avoid these serious diagnostic errors a routine procedure for examination of patients with backache should be adopted. A simple routine for this purpose is suggested as follows:

1. Men should be completely stripped for examination and women should remove shoes and stockings and all other clothing except brassieres and "panties."

2. Standing position: The patient, with good light on his back, should be directly in front of the examiner. If possible, there should be space enough to permit the patient to walk back and forth a few steps. The examiner should note whether the shoulders and hips are level, and curvature of the spine, and whether or not the erector spinal on one side or the other is tense or taut with muscular spasm. The patient should be directed to localize his pain by pointing with one finger and demonstrating the position of his body which makes the pain most acute. He should then go forward a few steps and the physician can observe stiffness of the back, forward or side listing of the trunk, a limp, when the trouble arises from the hip, or a definite tendency to walk with weight on the balls of the feet to avoid jarring the spine.

3. The patient should then stand in front of, but with his side to, the examiner and the light. Defects in his posture are thus seen, e.g., the head may be held forward, the shoulders drooping, the chest flat or with exaggeration of the dorsal curve, the abdomen protuberant, the curve of the lumbar spine flattened or exaggerated.

4. He should then be turned with his back to the physician and directed to bend forward as far as possible, keeping his knees fully extended. The physician must note the extent or range of the forward bending movement and where the motion occurs, i.e., at the hips, the lumbosacral joints or above, and any spasm or cording of the muscles that accompanies these motions. If the pain occurs as the patient bends forward and arrests his progress it suggests involvement of some of the joints, but if it is worse when the patient straightens it suggests an affection of the muscles or ligaments. In the same manner, side and backward bending movements should be observed, and lastly, twisting or turning of the trunk on the hips. Careful palpation of tender points should then be made to determine, if possible, whether these are over the joints, ligaments or muscles.

While the patient remains standing, his feet should be observed with reference to pronated ankles, flat feet, restriction of dorsal flexion, and tenderness over plantar ligaments. Shortened heel cords with restricted dorsal flexion, which is quite common in women, is often the cause of aching calf and thigh muscles and strain of the lumbosacral ligaments with pain in the lower back, especially after standing or walking in low heeled shoes.

5. With the patient seated, his back to the examiner and well-lighted, most of the examinations made while he was standing should be repeated and the results compared. In the sitting position, the hamstring muscles are relaxed and the pelvis is not rotated but weight of the trunk is still on the intervertebral joints and the spinal muscles are working to maintain the upright position. In the sitting position, if the patient bends forward with greater ease and with absence of muscular spasm that was present when he was examined while standing, it is probable that the seat of his trouble is in a sacroiliac joint or some of its supporting ligaments.

The examiner should proceed by testing the patellar reflexes and looking for callosities or tender points on the feet. The range of ankle motion may be checked by keeping the knee fully extended and pushing the forefoot dorsally. This position is the same as in the straight leg-raising test, and if the patient objects to one he will also complain of the other, if he is consistent. Malingerers and those with neuroses are seldom consistent in their reaction.

6. To get the most information possible, it is better to have the patient get on and off the table unassisted, and to lie down and get up by his own efforts, observing him closely as he does so. Patients with actual lesions of the spine or its supporting structures will unconsciously protect their backs by avoiding certain movements. All other motions will remain quite free whereas the malingerers or neurotic individuals will, with exaggerated grunting and puffing, lie down or turn over on the table. The latter, however, when notified that the examination is complete, may get up promptly with apparent ease and in dressing themselves go through many contortions and movements which appeared quite impossible under direct examination.

With the patient lying on his back, first one and then the other leg should be raised, keeping the knee straight, until it is perpendicular to the table. As this is done a normal individual will complain of tension on the hamstrings back of the knee and when one has a lesion of the sacroiliac joint he will complain bitterly of the pain in that region, sometimes with radiation down the course of the sciatic nerve.

As the leg is let down from the perpendicular position the foot may be placed across the opposite knee and the thigh forced into abduction and external rotation—a position which throws some strain on the sacroiliac joint and ligaments. Pain may be elicited from an inflamed sacroiliac by making lateral compression on the ilium on both sides, or by grasping the anterior superior spines and trying to force them apart.

The examiner should then slip his arm under both the patient's knees and flex first the hips and then the pelvis on the spine. If this movement elicits pain the lesion is in the lumbosacral joints or the spinal articulations above and not in the sacroiliac joints. Further proof of such involvement may be had by rotating the pelvis from side to side with the hips and knees flexed as previously described.

If there be any question of hip or knee affections, their ranges of motion should be tested and the joints carefully palpated for swelling and tenderness.

With the knees flexed and abdominal muscles relaxed, careful palpation of the four quadrants may indicate pelvic inflammation, a thick or distended colon or caecum, lesions of the gall bladder, kidney, or spleen, a psoas abscess or deep tenderness over the psoas muscle when it is in a state of spasm.

7. The patient should then be directed to turn, with his face down, and his manner of turning closely observed. His tender points should then be palpated, recalling that while the patient is prone his spinal muscles are relaxed and free of strain. He should next prop his head and shoulders on his hands and elbows, thus producing moderate passive hyperextension of the spine. Active hyperextension requiring great muscular effort is obtained by directing him to clasp his hands behind his head and lift his head, shoulders and chest clear of the table.

He should then be permitted to relax a few minutes and directed to lift his leg and thigh clear of the table, keeping the knee extended. This movement calls the gluteii and lower spinal groups into action and throws considrable strain on the sacroiliac and lumbosacral articulations.

8. Female patients should then be draped for rectal or vaginal examination and male patients should routinely have a prostatic examination.

9. Examination of the head, chest and lungs may be carried out at this point, if it had not been done before.

10. The routine just described will usually have to be supplemented by roentgen examination of the lumbar spine and pelvis. The completed films should include oblique views of the lumbosacral articular facets, as well as anteroposterior and lateral views of the lumbar spine and pelvis, and visualization of the gastrointestinal tract, genitourinary tract, gall bladder, sinuses or teeth, as may be indicated.

The routine blood examination, sedimentation rate and urinalysis are essential data. Disorders in the urinary tract are most likely to be accompanied by abnormal urinary findings; the examination of the blood and the sedimentation rate, besides giving an index to the patient's general condition and state of resistance, are most helpful in making a diagnosis of the acute, generalized infections or osteomyelitis.

With information obtained from the history carefully taken, from a complete physical examination, and from the roentgen ray and other laboratory data, it should be possible to make a differential diagnosis with reasonable accuracy. The first step is to rule out the generalized infections and then consider whether the symptoms are of visceral or skeletal origin.

The following outline presents some of the more prominent differential points.

VISCERAL	SKELETAL
1. Pain, sharp, agonizing, a "catch" sense of weight.	1. Pain, sharp, agonizing, a "catch" in the back with stiffness.
2. Pain located in the mid-sacral region.	2. Pain in the sacroiliac or lumbosacral areas.
3. Aggravated during menses.	3. Affected but little by menses.
4. But little affected by bending and stooping.	4. Always aggravated by bending and stooping.
5. Pain worse on palpating the prostate or uterus.	5. Pain not elicited by vaginal or rectal examination.
6. Slight relief on lying down.	6. Complete relief on lying down.
7. Prostatic pain in mornings, lasts until noon.	7. Arthritic pain and morning stiffness pass off in an hour.

When all the diagnostic data have been assembled, and the patient's trouble has been located in one of the larger classifications, i.e., of generalized infections, neuroses, visceral or skeletal affections, the problem is greatly simplified. By comparing the positive findings from examination of the patient with the cardinal diagnostic points of the few lesions in each group as given in any standard text, the correct conclusion can be reached in most instances. The high percentage of errors in the diagnosis of back complaints arises more from inadequate histories and physical examinations than from ignorance of the possible lesions.

SUMMARY

1. Back pains are seldom correctly treated because they are not accurately located and diagnosed.

2. The data obtained from a careful history and thorough physical examination are most important.

3. A simple routine for physical examination of the back has been outlined and the principal differential points between symptoms of visceral and skeletal origin have been listed.

Convulsive Disorders of Childhood*

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CONVULSIONS occuring in infants and children are usually very alarming to the parents and may be quite a diagnostic problem to the attending physician. It may be due to pathology of the nervous system or to some external physiological change indirectly affecting the nervous system. The convulsion is usually over by the time the doctor arrives but if it is not the parents want something done immediately.

TEMPORARY TREATMENT

Among the temporary or immediate things which can be done are, inserting a mouth gag, tepid or alcohol sponges, a cold enemata, rectal instillation of bromides or intramuscular injection of sodium luminal. If the convulsions continue or recur rapidly the inhalation of chloroform is often very helpful.

ETIOLOGY

After the convulsion is over an attempt should be started to find out the cause. This may be due to a large number of things which may be grouped or classified as follows:

I. **Bacterial**
  - Meningococcus
  - Tubercle bacillus
  - Streptococcus
  - Pneumococcus
  - B. influenza
  - B. Coli
  - Staphlococcus
  - Treponema Pallidum
  - B. Proteus
  - Gonococcus
  - B. Typhosus
  - Yeasts and Fungi
  - Alkaligines Bookeri

II. **Virus**
  - Polio-myelitis
  - Encephalitis
  - Vaccinia
  - Chorea
  - Aseptic Meningitis
  - Encephalitis (associated with measles and chicken pox)

III. **Irritative**
  - Serum
  - Drugs (especially strychnine and lead)
  - Extra-dural lesions
  - Sub-dural Hematoma

IV. **Toxic**
  - Otitis
  - Pneumonia
  - Pyelitis
  - Tetanus
  - Influenza
  - Other infectious diseases.

V. **Disturbance of Mineral Metabolism**
  - Tetany in rickets or tetany in hyperquanidinema

VI. **Respiratory Disorders**
  - Atelectasis of newborn
  - Paroxysms in pertusis

VII. **Trauma of Brain**
  - At birth or following an accident

VIII. **Malformation of the Brain**
  - Microcephalis
  - Mongolism, etc.

IX. **Reflex Causes**
  - Irritation or disturbance in gastro-intestinal tract
  - Heat prostration treated by alcohol rubs and ice packs. If the temperature is subnormal begin applying tepid water, gradually increasing to hot.

X. **Allergy**

XI. **Unknown Etiology**
  - Idiopathic epilepsy

HISTORY

A good history is often very valuable. Fever is the most constant symptom of meningitis. In older children headache is frequent. Vomiting and drowsiness is often present in all ages with meningitis. Was onset sudden and it usually is in epidemic meningitis, or was it slow as is usually the case in tuberculous meningitis, brain abscess and tumors? Whether the patient has or has had fever is helpful in excluding a number of non-infectious causes.

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*Read before the 115th Semi-Annual Meeting of the North Texas Medical Association Meeting, June 28 and 29, 1938, Dallas, Texas.

Has the child had a cold, pneumonia, recent or old discharge from the ears? This may give clue to pneumococcus or streptococcus meningitis or brain abscess. Whether the child had measles or any other infectious disease recently will often give a clue to post-infectious encephalitis.

A history of the birth may be helpful. Was the delivery normal, precipitate, of long duration, were instruments used? Was the mother toxic? Did the child have cyanosis or convulsions immediately after birth?

Physical and Neurological Examination

Observing the patient for a few minutes is worthwhile as young children are not as cooperative as adults. Is the neck drawn backwards? Are the thighs flexed on the abdomen? Is the child conscious?—they often are in meningitis (meningococcus). Are there involuntary muscular twitchings? Is there wasting of the muscles? Is the size and shape of the head normal? Is the expression on the face one of normal intelligence or is it one of stupidity? Cranial nerve lesions are often missed by not noticing inequality of the pupils, a ptosis, strabismus, absence of expression on one side, the lowering of one corner of the mouth, the inability to hear, swallow or talk. Are the respirations rapid, regular or irregular? Are there petechiae or a rash?

After observing the child there should be a careful symmetrical percussion and auscultation of the chest as pneumonia is a very frequent cause of convulsions in children. Their heart should be examined for an abnormality. There may be a negative endocarditis with sepsis, causing fever and convulsions. The abdomen should be examined for any abnormal masses, viscera, distention or spasm since a large number of abdominal conditions begin with vomiting and headache and many children point to their stomach with all illnesses. (While admitting officer on pediatrics I had a family doctor send me a case of meningococcus meningitis with a diagnosis of acute appendicitis and that it should be operated on that night). The genitals should be examined for any abnormality and possible strangulation of viscera. The extremities should be examined for clubbing, cyanosis and especially edema as the first symptom of acute glomeerulonephritis is frequently a convulsion.

Enlarged glands will give evidence of a virulent infection, blood dyscrasia or lymphatic disease.

Of the neurological signs stiffness of the neck is probably our most valuable sign in meningitis but it may be present to a certain extent without meningeal inflammation. In young infants with an open fontanelle the tension is a valuable sign depending on the hydration of the child. Irritability and hyperesthesia are suggestive only.

A very valuable sign for meningitis of infants and children in determining the hypertonicity of the extensors of the spine, hips, legs, and head is the Brudzinski neck sign. Passive flexion of the head is followed automatically by flexion at the hips and knee joints. For the same purpose of determining meningeal irritation is the Kernig sign in which there is an attempt to extend the legs on the flexed thighs. This is not very reliable in infants.

The triceps, brachio-radials, knee jerk and achilles jerk are most valuable if unequal or absent as in poliomyelitis or peripheral palsies. Their absence indicates damage to the lower motor neurons. The abdominal reflexes are valuable at times and indicate interference with pyramidal tract conduction or lower motor neuron damage. The stroking of the outer surface of the sole of the foot with a resulting extension of the great toe and fanning of the lesser ones, is known as Babinski's sign in pyramidal tract lesions in older children but not in infants.

Chvostek's sign made by striking the face muscles below the zygoma with a resulting contraction or series of contractions is seen in tetany.

The ripe watermelon tone or Macewen's sign in percussing the cranium is valuable only to those who practice it for a long period.

Last but not the least important is the examination of the eyes, ears, nose and throat. The fundi may show signs of increased intracranial pressure, increased vascularity, tubercles, cherry red spots, hemorrhages, etc. The throat may show evidence of sufficient infection to be causing the fever and convulsions. The ears may show where the meningitis started. These examinations are most annoying to children and should be done last.

The above study and examination will give you a fair idea of what is the next step. As the surgeons often say, shall we operate; the pediatricians and medical men say, shall we do a lumbar puncture—yes, if there are not sufficient signs and symptoms outside the nervous system to explain the illness.

LABORATORY FINDINGS

If in doubt, examination of the urine may reveal the onset of pyelitis or nephritis, causing the convulsions. A blood smear may show stippled red cells associated with lead poisoning or malarial parasites and they frequently cause convulsions. In colored patients a suspension of the red cells and examination for sickling may reveal the etiology of a stiff neck. They rarely have convulsions.

A leukocyte count, if elevated, is added evidence of a pyogenic infection and if low may make you think of typhoid, malaria or other types of disease.

A culture from primary sites of infection as the naso-pharynx, draining ears, abscess, etc., may give the only clue. A blood culture is frequently positive when of pyogenic origin.

Chemical analysis is helpful when there is suspected disturbance of mineral metabolism, the endocrine, kidney function, etc. The calcium phosphorus, blood urea nitrogen, blood sugar, hydrogen ion concentration and guanidine are usually the most valuable. These are especially worthwhile in suspected diseases as hyper or hypoparathyroidism, tetany, hyperinsulinism, diabetes, diarrhea and nephritis.

The parents or grandparents may tell you in the beginning that the whole trouble is from worms so to be on the safe side examine the stools for ova and parasites. It may and may not be the etiology, (while interning I saw a child who had been having convulsions frequently during the days—the first in his life. No explainable cause could be found until the next morning he began to have loose stools with blood and mucous. A culture revealed bacillary dysentery of the Shiga type.

If it is decided a lumbar puncture is necessary a sedative as codeine or phenobarbital 20 to 30 minutes before procedure is helpful to the patient and physician. A more accurate determination of the spinal fluid pressure can be obtained when the child is still and not crying. Enough fluid should be drawn to make a smear, a culture a chemical study and a small amount to allow to stand for the formation of a webb. In general a cloudy fluid is indicative of a pyogenic infection as in Group I, except tuberculous and luetic which may be clear. The few cases that you see early may be almost clear or of ground glass appearance. A bacterial study is necessary to be sure. If fluid shows no increase in cell count the etiology will fall under the last—Groups under Etiology.

X-RAY

Anterior and posterior views of the skull, spot films of the mastoid and base of the skull may reveal unexpected pathology or injury.

Encephalograms are of value in a small number of cases. However, if surgery is contemplated it is usually better to refer the case to a neurological surgeon. They frequently prefer a ventriculogram and why put the child through an extra painful procedure.

DIAGNOSIS

The diagnosis may be simple and only a careful clinical study is necessary and none or only a few laboratory or x-ray studies necessary. It may also be very obscure and a large number of the above procedures may be required. A large part will depend upon the interest and keenness of the physician's clinical judgment.

PROGNOSIS

This will depend upon the etiology, the physician in charge and the facilities for treatment.

PREVENTION

Better child health, more rigid public health measures, more well-trained obstetricians, better prenatal care and more conscientious and educated mothers are the only things I know.

TREATMENT

To discuss all of the above causes in detail would require more than the time permits but in all diseases after the diagnosis is made the treatment is usually easy.

There are a few general things that should be kept in mind.

1. Rest, produced by sedative if necessary.

2. Nutrition.—If a prolonged illness the gavage of milk, cream, eggs, iron and added vitamins may be necessary. Frequent (every 2 to 3 days) small blood transfusions may not only help to keep the nutrition up but

help to overcome the infection.

3. Keeping up the fluid balance and, if there is edema of the brain, injection of hypertonic solutions as glucose and magnesium sulphate.

4. Treating such primary lesions as otitis media, mastoiditis, abscesses, etc.

Until recently it was considered that for those cases of meningitis for which there was a serum that it should be given intra-spinally. A. L. Hoyne of Chicago has a lower mortality for intravenous therapy alone in meningococcus meningitis than was previously reported from intra-spinal treatment. Serum is irritative to the meninges as is any foreign substance. A spinal fluid cell count of 2 to 3 thousand often results from the injection of air in encephalography.

As for specific treatment in meningitis there are cures from serum in meningococcus, streptococcus, pneumococcus and B. influenza. All of the above mentioned as well as that due to B. proteus and gonococcus may be treated with sulfanilamide. My own feeling is that although sulfanilamide is given and has a high incidence of cures that the combination with a few intravenous treatments with serum will still lower the mortality.

General supportive measures is all that has proved of value thus far in the other types of infection except forced or continuous spinal drainage. A new staphlococcus antitoxin on the market may prove of some value.

Of the virus diseases convalescent serum is the only probable helpful specific agent. Chorea if it be a virus disease and some form of post-encephalitis have been helped with heat, especially diathermy and hot water gradually raised 80 to 115 degrees. In chronic encephalitis atropine (10-15 drops of 0.5% sol.) decreases the rigidity and tremor and benzedrine sulphate (20-30 mg. daily) decreases the tendency to sleep during the day and lay awake at night.

When the convulsions are due to irritative causes an attempt should be made to remove this.

When due to toxic origin treat the causative disease.

In tetany calcium, cod liver, ultra-violet light and parathyroid extract (if due to a deficiency) is the accepted treatment. If there is acidosis this should be treated with glucose, saline, Hartman's solution and sodium bicarbonate.

If due to atelectasis oxygen carbon dioxide and removal of mucus is helpful.

Trauma to the brain may be benefited by spinal drainage, hypertonic solutions and sedatives. Surgical interference may be necessary.

There is no cure for malformation of the brain.

If of reflex nature try to find the cause and remove it.

If of allergic origin remove the source if possible and if not try to desensitize the patient to the allergen.

If the convulsions are of unknown etiology, sedation, limiting the fluid intake and or acidosis from a ketogenic diet or mandelic acid, is the most satisfactory treatment at present.

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The High Spots of Sinus Trouble in Practice of Medicine

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MOST HUMAN AILMENTS appear to travel in waves which are foremost in popularity from time to time, being popularized mostly at tea time or at the bridge table. I enjoyed Dr. Munthe's splendid book: "San Michael," in which he described the fad of mucous colitis so popular among the royalty, would be royalty and near would be royalty of so many of the European capitals. He was able to move his offices from one great city to another far distant one and like magic word would spread around that the great "Specialist" was in town and very soon his offices would be filled with patients afflicted with colitis. And so along down the line each disease has had its day from ingrowing toe nails to tonsillitis. However, they seem to have most carefully avoided the most important of all, and that is sinusitis. Not only the laity and general practitioners but some of our most famed diagnostitions. It is most pitiful to go through the medical wards of our city, county and state hospitals and read the charts of those patients afflicted with rheumatism, cardiac, kidney diseases, unresolved pneumonia and even fevers of unexplained origin, where the attending physician has very diligently searched for foci of infection, making note that the teeth and tonsils have been thoroughly examined, yet made no request for x-rays of the sinuses or for consultation from the otolaryngologist. It is beyond me how anyone who ever studied anatomy, histology and physiology could possibly overlook the eight cavities of the nasal sinuses and the possibility of their frequent infection.

The mucous membrane lining the throat is continuous with that of the nose, just as the mucosa of the sinuses is an out-pouching of the nasal mucous membrane. Then it is easy to understand how a pharyngitis or tonsillitis may so readily extend to become a rhinitis and sinusitis.

In taking up the etiology of sinus infection we must stress the balanced diet in early infant feeding. This includes the now popular avitaminosis. In children, if the sinusitis has not advanced too far, a balanced diet will effect a cure. But do not let this be confused with the recently popular idea that diet could cure the chronic sinus infections of adults. Allergia and endocrine imbalance cause the mucosa to lose its tone, infection enters a fertile bed and so destroys the function of the delicate cilliated mucous membrane, so that correction of the underlying cause cannot effect a cure. Poor ventilation and over-crowded rooms are certainly a disturbing factor in an already infected sinus. Nature's method of ridding the respiratory mucous membrane of irritating substances, bacteria, etc., is an increased flow of mucous secretion. Hence, the lately popular prescription of belladonna, narcotics and other agents that dry up the mucous secretion is now being condemned.

Hypertrophied and infected tonsils and adenoids, especially the adenoids, are a most prominent causative factor in sinusitis. The not uncommon practice in childhood of foreign bodies being pushed into the nose if not discovered early will most surely result in chronic sinus infection. Marked deflections of the nasal septums obstructing free air passage and free drainage from the sinuses are a great predisposing factor in many acute head colds and acute sinus infections. Complete removal of the middle turbinate almost invariably results in a chronic infection of the sinuses draining into the meatus protected by this scroll-like turbinate, namely: the frontals, anterior ethmoids maxillary — the ostia having been left exposed to direct invasion by inspired bacteria and deprived of the protective mucous secretion from the middle turbinate. Nature will endeavor to reconstruct the deranged anatomical structure by an out-pouching of the mucous membrane. A polypoid degeneration takes place, the nasal cavity being filled with plyps, sinus drainage

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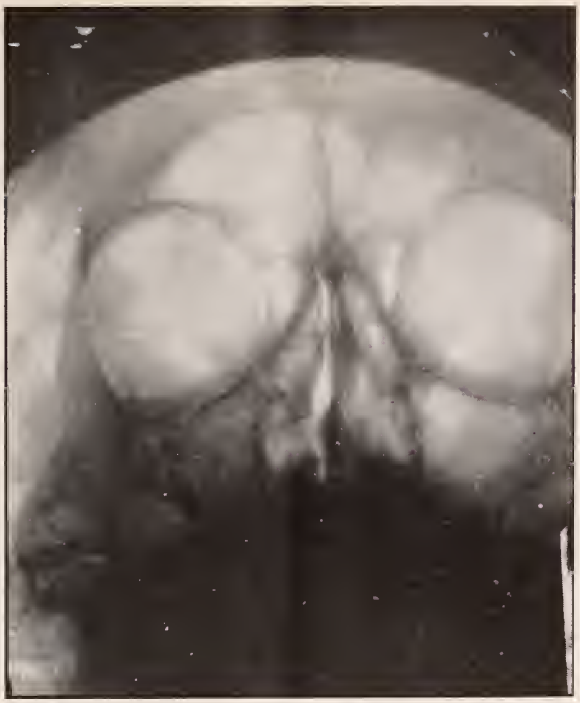
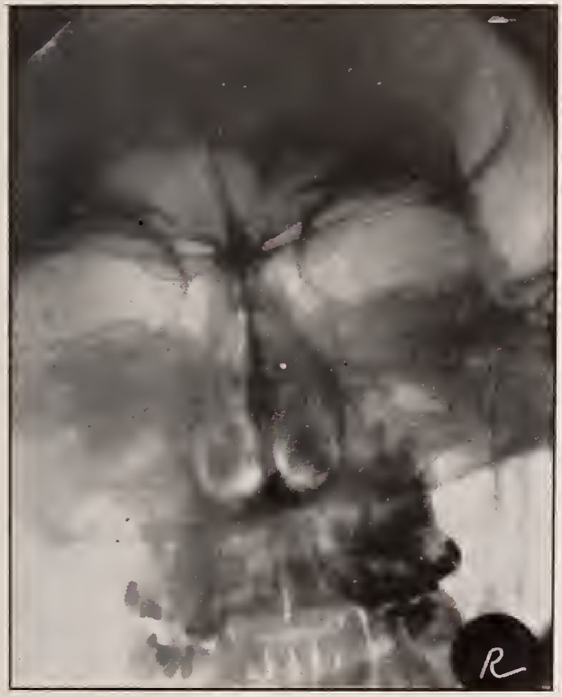
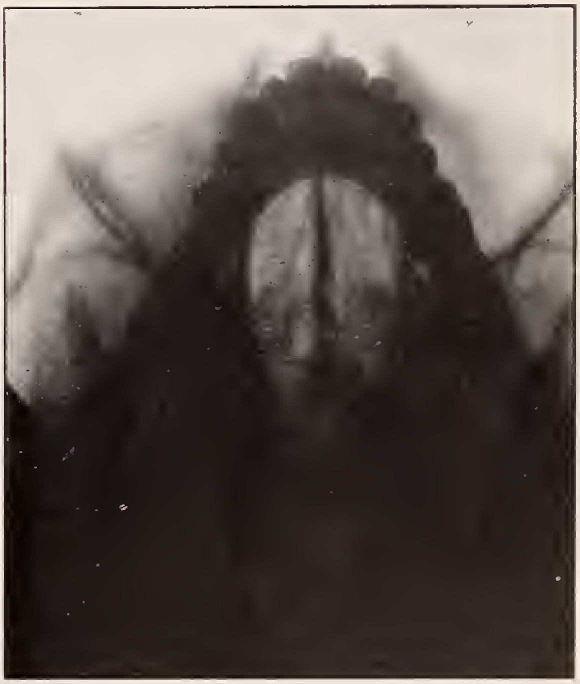
*Read before the Thirteen-County Medical Society, June 21, 1938, Tishomingo State Park, Tishomingo, Miss.





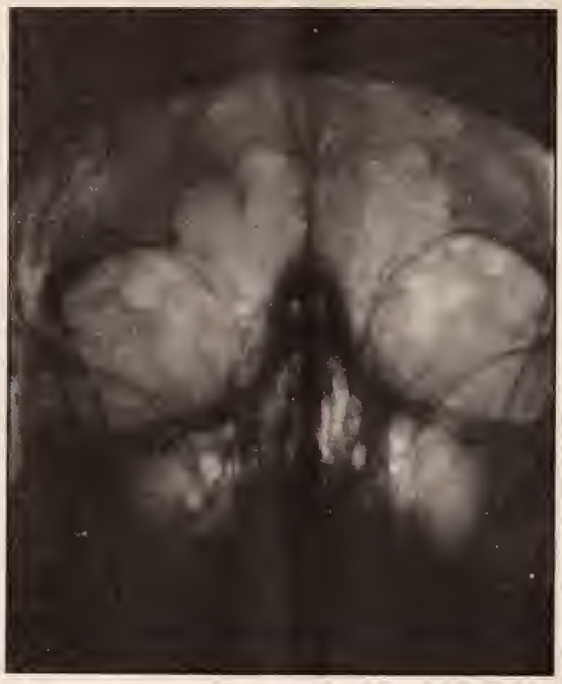


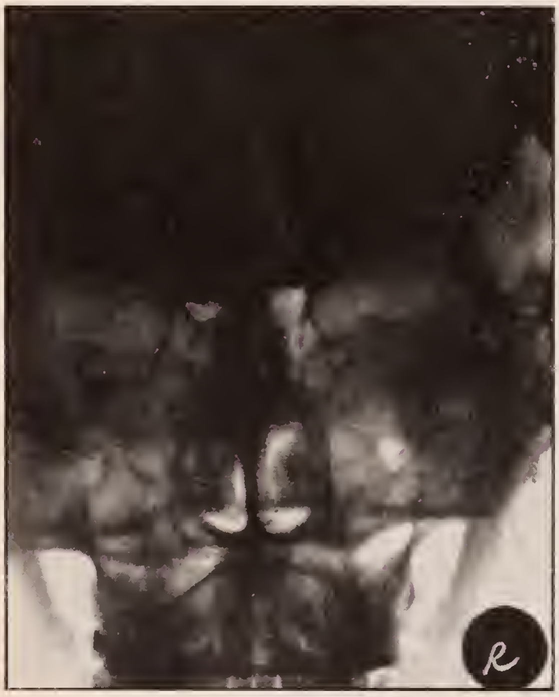
Case Report No. 1—Miss L. B., middle age, white, came into the office of Dr. V. D. King complaining of severe pain in chest, chronic bronchitis with frequent attacks of acute bronchitis. Also, complained of being weak and easily fatigued. She was formerly a church singer and had to quit singing on account of chronic hoarseness. Dr. King examined the patient thoroughly and had her x-rayed with the following report:

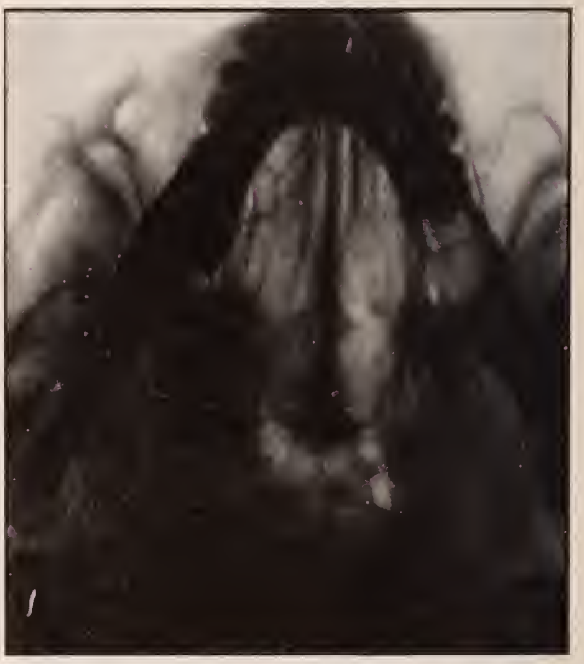
> "Examination of the sinuses shows an opacity of the left antrum and thickened mucosa of the right antrum. Other sinuses negative. The left antrum contains pus. The chest shows an increase in bronchial markings in both upper lobes. There are definite changes in the upper left hilus."

Then Dr. King referred her to me. I irrigated the left antrum and there was a return flow of very foul clear purulent material. The irrigations were continued each day for about a week until the return flow from irrigation became clear. Patient now states that she is feeling better than she has in years.

It is possible that a radical antrum may have to be done on this case at a later date but certainly feel that I should temporize with her until I am sure the case cannot be cured without a radical antrum operation.







Case Report No. 2—Miss L. T., white, female, age about 30 years, came into my office May 23, 1938 complaining of running a temperature daily of 99 to 101 for about two years, throat sore and red, slight pain on swallowing for a period of same duration and almost a continuous postnasal discharge which was bloody at times. On x-ray examination we have the following report:

"Examination of the sinuses reveals a haziness of the left antrum, ethmoid, frontal and sphenoid. The ethmoid and sphenoid sinuses apparently contain pus. The right side is essentially negative. Condition due to a left pan-sinusitis."

The left antrum was irrigated and returned clear. The left sphenoid and posterior ethmoid were easily irrigated with a thick bloody muco-purulent return. The irrigations of sphenoid and ethmoid were continued daily for a period of abuot ten days when the temperature became normal and the return flow from the irrigation clear. The patient states that she is free of all symptoms; cough, sore throat, headaches, postnasal discharge, etc. Her appetite is good and she really enjoys life.

and free air space being obstructed and a resultant chronic sinus infection.

The symptoms of an acute sinusitis are the same as those of an acute head cold with the exception possibly, of an acute tenderness over certain sinuses, and so familiar to all of us that we need not go into details. The chronic sinus infections may be characterized by periodic exacerbations, by a constant purulent discharge from the nose accompanied by severe headaches, frontal, occipital or both, with pain radiating down the neck even into the shoulders; or the patient may not even be aware that he has sinus trouble at all. However, there are three prominent symptoms that must be stressed here and that practically always accompany sinus infection: the characteristic hawking, pulling down from the posterior nares secretion, varying from a thick tenacious, yellow material to the thin clear burning fluid; a chronic pharyngitis; and chronic or frequent attacks of laryngitis. Transillumination is helpful but not diagnostic. X-ray is extremely helpful but not infallible. Many chronic antrums filled with cholesteotomatous material fail to give shadows in the x-ray plate. It is extremely difficult for the roentgenologist to prove pathologic changes in the posterior ethmoid and sphenoid sinuses.

To use the phrase so often applied in closely contested athletic contests, "anything may happen," in the way of complications. Otitis media and mastoiditis seldom occur without a pre-existing sinus infection. Many patients afflicted with pain around the eyes, sensitiveness to light, requiring frequent changes of glasses without satisfactory results are relieved of these symptoms by attention to the sinuses. Chronic pharyngitis and laryngitis as mentioned before are practically always a result of sinus infection. Bronchitis and bronchiectasis respond much more readily with co-operative sinus treatment. Lung abscesses, pneumonia and even the dread tubercle bacillus find a fertile field to thrive in when complicated with sinus infection. Dr. Cullom of Nashville, Tenn., and the late Dr. Mullen of the Crile Clinic have shown a long series of x-ray plates demonstrating the chest and sinus complications. Another complication not to be overlooked is the enlargement of the cervical glands, especially in children. Many maladies of the digestive tract such as ulcers of the stomach, duodenum, mucous colitis, sigmoiditis, amebiasis, fissures, etc., respond more readily to treatment on correction of the sinuses. Other complications to be mentioned are those of the urinary tract and nervous system which may be anything from an undue excitability to a brain abscess, arthritis both chronic and acute and last but not least, osteomyelitis, especially of the frontal bone.

Treatment must be directed to removal of the cause. A well balanced diet and proper ventilation are well-known essentials to good health, their interpretation being modified by the nature of each different individual and governed by the advice of the family doctor. Especia care to the feet is most necessary; a foot bath and change of stockings and shoes daily is important. The feet should always be kept dry. Swimming is particularly harmful. Some individuals are sensitive to tobacco smoke but unaware of the fact. Correction of endocrine imbalance and allergic disturbance will often relieve sinus trouble and vice versa, correction of sinus trouble will often relieve allergic conditions.

The mucous membrane of the nose is very delicate and its function easily disturbed So, in reducing the congestion of a tight nares we must select an agent so mild in its reaction that it will reduce and not irritate the mucosa . Plain tap or well water will cause an edema of the mucous membrane and impair the function of the delicate cillia. Such agents as the silver salts and volatile oils will cause a greater impairment. A one-half to one per cent ephedrine with one-eighth per cent cocaine in a normal salt solution causes shrinkage of the membrane and allows free function of the cilia.

Removal of polyps and correction of the deflected nasal septum are practically always followed by relief of the sinus condition but rarely a cure. A follow-up treatment, a few weeks later, with treatment and irrigation, removal of all infected teeth, cavities filled and a general clean up of all mouth conditions by a competent dentist is stressed. Children should be taught the proper technic in clearing the nasal passages. Interfering adenoids should be removed to effect free respiration and proper sinus drainage.

Sinus infections that can be controlled by conservative treatment certainly should never be subjected to radical operative measures. However, there are those cases which are so diseased that all conservative measures fail and due to existing complications radical operations must be resorted to. This should be approached with utmost precaution. A thorough check up by an internist and the body resistance brought to the highest point possible is important. The sinus condition should be treated to permit as clean operative field as possible. X-ray pictures with and without iodized oil should be made and these carefully explained both to the patient and the family physician, pointing out the pathologic changes and stressing the necessary of removal. If more than one operation is considered necessary, be sure to advise the patient and his physician of such. A misunderstanding of these conditions has probably been largely responsible for the current idea that one sinus operation calls for another. In conclusion the operative measures will merely be mentioned.

Due to supra-orbital cells and accessory cells of the antrums, the external operation is the operation of choice, the "Fronta-ethmosphenoid" and the radical antrum by the modified Caldwell-Luc method. The ethmoid labyrinth and sphenoid can very plainly be brought into view and exenterated by this method. This operation is best done under local anesthesia with a preliminary analgesic anesthesia.

Chronic Cervicitis—Symptomatology and Treatment

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CHRONIC cervicitis is one of the pathologic lesions most frequently encountered by the gynecologist, and may so mimic other pelvic conditions that often ill-advised laparotomies are performed, when the cervix is at fault, and not the intra-abdominal organs, which leave the patient with little or no relief from her symptoms. Only too often, although the cervix is correctly recognized as the etiological factor in the production of the patient's symptoms, therapeutic measures are used, which are not particularly adaptable to the case, and which may not only fail to benefit the patient, but may leave her in a state much worse than she was prior to treatment.

The cervix, with its two types of epithelium, its deep-seated, compound racemose glands, its abundant lymphatic supply draining towards other organs, and also because of the fact that it is so easily exposed to infection and trauma, is an ideal place for the entry port of organisms and the development of a chronic, deep-seated infection which defies even the most vigorous treatment.

In the normal cervix, the canal is lined by a single layer of columnar epithelium that is bathed by an alkaline secretion and is exposed to relatively few organisms. The vaginal portion of the cervix, on the other hand, is covered with epithelium which is stratified squamous in type, and is usually exposed to acid vaginal secretions and to an enormous number and variety of organisms. These two types of epithelia usually meet in an abrupt manner at the external os, but often, due to congenital defects, childbirth, instrumentation, or infection, the columnar epithelium becomes exposed to the vaginal secretions and flora, in the form of an erosion or eversion. These factors add to the ease with which invading micro-organisms are able to penetrate the deeper structures of the cervix and to set up a chronic inflammatory process. Irrespective of whether the invading organism be the gonococcus, streptococcus, staphylococcus, or colon bacillus, in the chronic stage, the histopathology is identical.

This process once established produces a variety of symptoms: leucorrhea, backache, unilateral or bilateral pelvic pain, irritable bladder, sterility, menorrhagia, dysmenorrhea, and though rarely, is a focal point for distant lesions—arthritis and iridocyclitis.

LEUCORRHEA

Leucorrhea is the most frequent symptom of cervicitis, and is never normal. It is no more normal for a woman to have a constant vaginal discharge than it is for her to have a constant discharge from her eyes, or her nose, or her ears. A slight amount of mucus passed just before and just after the menstrual period can be considered within normal limits, but a discharge which persists throughout the major portion of the mouth should be investigated and a thorough attempt made to relieve this condition. Aside from staining the underclothes, and occasionally producing pruritis, leucorrhea causes little or no discomfort.

BACKACHE

As the infective process in the cervix continues unarrested, there is an extension into the lymphatics, usually down the uterosacral ligaments, which is one of the most frequent causes of backache due to a pelvic lesion. Although backache is a common complaint in the female and may be due to a number of intra or extragenital causes, clinically, we are easily able to ascertain whether or not the cervix is the cause of the patient's backache. By placing the examining fingers posterior to the cervix and lifting the cervix towards the symphysis, an attempt is made to reproduce the patient's pain. Should this maneuver be successful in reproducing the patient's pain, that is, in giving her the same type of pain, in the same location that she complained of prior to examination, then we are certain that the patient's cervix is responsible for her backache, and that the proper therapeutic procedure applied to this diseased area will produce an amelioration of symptoms.

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PELVIC PAIN

Chronic cervicitis not infrequently is a cause of pelvic pain, either unilateral or bilateral, of such a degree and such intensity that it might easily be confused with the pain of chronic bilateral salpingitis. Here again, it is a lymphatic extension from the infected cervix into one or both sides of the parametrium which is the causal agent in the production of the pain. I have seen cases that have had either salpingectomy, or salpingo-ophorectomy, or bilateral salpingo-oophorectomy, and hysterectomy, return to the clinic complaining of the same abdominal pain they had experienced before operation, or else complaining that though they had had some relief, there was still enough pain present to make them uncomfortable. Examination of these cases very often revealed a cervix that was badly diseased and that had received inadequate, or no treatment at the time of operation. Appropriate therapeutic measures applied to these cervices, in a large majority of cases, relieved their symptoms. This does not mean that laparotomy was not justified, but it does prove that the cervix, when diseased, can and does produce symptoms that are uncomfortable, severe, constant, and similar in character to those produced by disease of intra-abdominal organs; and that these symptoms will not be relieved unless the diseased cervix is properly cared for. In attempting to determine how great, or how little a part of the cervix plays in the production of pelvic pain, we usually place the examining fingers into first one lateral fornix and then into the other, and by pushing the cervix to the opposite side of the pelvis, we try to reproduce the patient's pain. If the pain is on the right side, the cervix is pushed to the left, and vice versa. Then again, it is important not only to ask the patient, "Does this hurt you?" but "Is this the same pain that you complained of?" If this be the case, and there is an absence of palpable masses in the adnexae, then we are fairly certain that the patient's pain is due to cervical, and not to adnexal pathology. If this maneuver fails to reproduce the patient's symptoms, then they are not due to cervicitis. As a general rule, it can be definitely stated that in the absence of palpable lesions in the adnexae, ability to reproduce the patient's pain by moving the cervix to the right or to the left, means that the cervix is the etiological factor.

IRRITABLE BLADDER

There is a definite relationship between chronic cervicitis and trigonitis. Winsbury-White[1], in his experiments, proved this relationship by the injection of India ink and organisms into the cervix. He found that the lymphatics of the cervix drained directly into the base of the bladder in the region of the trigone, and concluded that "cystitis is a constant companion of cervicitis, and one's experience is that it is extremely difficult to get a satisfactory response to treatment of a cystitis which is accompanied by a neglected cervix. This is important in that numerous cases of irritable bladders have been relieved by local treatment only to recur when this treatment was discontinued. Proper treatment of infected cervices in these cases not only produces relief but cure. Perhaps the largest number of cases of this type which have been reported are to be found in the works of Herrold, Ewert, and Morgan[2], Boland[3], and Ainsworth-Davis.

STERILITY

Though not a symptom but a clinical entity, sterility due to cervicitis should be discussed under this caption, because, on account of infection, there is often a thick, tenacious mucus plug in the cervix, which is not only detrimental to the viability of the sperm, but is actually so thick as to preclude any possibility of the sperm penetrating it. In office practice, it has been my experience that chronic cervicitis, alone or in combination with other factors, has been one of the most frequent etiological agents encountered in cases of sterility, and that following reduction in the amount of the infection or clinical cure, pregnancy usually occurred.

MENORRHAGIA AND DYSMENORRHEA

Increased bleeding at the menstrual period associated with a slight degree of irregularity, is sometimes found in women, and no other pathology aside from chronic cervicitis can be discovered. Occasionally, an endocrine background will be associated. But of this group of cases, we have been impressed by the small number of patients whose menstrual period returned to normal in regard to regularity and amount of flow following proper therapeutic measures applied to the diseased cervix. In these cases, we have lymphatic involvement of the walls of the uterus, producing a low grade metritis with consequent pelvic engorgement and also extension of infection into the lymphatics of the broad ligament and to the ovaries, with the production of edema and congestion, and consequent interference with proper follicle development and rupture, which in turn is reflected in the uterus in the form of abnormal endometrium and abnormal bleeding. The same is true in cases of dysmenorrhea. Cases such as these are frequently seen in the postpartal period, at which time, an erosion or an eversion and cervicitis plays a definite role in retarding proper involution of the uterus, and it is here that the cautery, early treatment and prophylactic measures, will save a large number of women from future discomfort and future pelvic operations.

Arthritis and Iridocyclitis

Rosenow[5] and Moench[6, 7] have proved experimentally that the cervix is a focus in cases of arthritis and iridocyclitis. The latter investigator, by taking cultures from infected cervices, in cases of arthritis, and subsequently injecting the organisms into experimental animals, was able to produce arthritis in these animals. Walters[8], and Mayo and Dixon[9] report cases of arthritis and iridocyclitis that have improved or have been cured following the removal of a diseased cervix. I know of two cases of extensive arthritis[10] that were cured following the removal of markedly diseased cervices. And though granted it is rare, the cervix is at times the focal point in the production of arthritis and iridocyclitis, and if the teeth and tonsils are negative as to disease processes, certainly the cervix should be looked upon as a potential focus of infection, and proper therapy should be instituted.

Treatment

Though there has been much discussion pro and con as to whether or not carcinoma develops as the result of cervical infection, the majority of investigators and clinicians believe that an infected cervix is potentially better soil for the development of carcinoma than is a normal cervix. Irrespective of whether cervical carcinoma does or does not arise as the result of chronic endocervicitis, we do know that a mild cervical infection left untreated will gradually produce hyperplasia and hypertrophy of cervical tissue and will spread by the lymphatics to contiguous structures, and produce any, or all, of the annoying and debilitating symptoms described before. Furthermore, the longer an infected process is allowed to remain in the cervix, the greater will be the degree of hypertrophy and hyperplasia, and the more radical will be the therapeutic measure necessary to produce a cure. This leads to but one conclusion, namely, that all cases of cervicitis should be treated vigorously by appropriate methods, and the earlier the treatment is effected, the less disability, discomfort, and radical surgery the patient will have or need in the future. Women and physicians should be taught that leucorrhea is never normal and that the earliest sign of carcinoma of the cervix is leucorrhea.

There are various methods of treatment advocated for the cure of cervicitis. Antiseptics, such as iodine, mercurochrome, silver nitrate, merthiolate, etc., have been applied locally and injected into the cervix in an effort to produce cure. As the infection is always deepseated, and far-removed from the effect of these drugs, we believe that this type of treatment is not only ineffectual, but futile. Caustics, such as Philo's paste, have been applied, and have their advocates, but these are few, and the large number of strictures and the small number of cures resulting from this type of treatment leads us to condemn it. Copper ionization has been championed by some authorities, but this method of treatment has never received much support or use except by a very small minority of gynecologists. In treating cervicitis, the members of the Department of Gynecology of Tulane University rely upon the cautery, surgery, and occasionally, in selected cases, upon conization. The degree of success attained by the use of any one of these latter three methods depends upon the proper type of procedure as applied to the proper type of cervix.

There are two basic factors that guide us in our choice of operation: First, the degree of infection as evidenced by the amount of hypertrophy, hyperplasia, and cystic change in the cervix; and second, the degree of laceration, that is, whether the laceration has been extensive enough to produce eversion or not. The site of the laceration, or whether it is unilateral, bilateral, or stellate, has little or no influence upon the choice of procedure to be used.

The cervix, which is without eversion, but has a mild erosion and little or no endocervical involvement, is best treated by destruction of the erosion with the actual cautery, and cauterization of the cervical canal with a very fine point cautery, care being taken not to cauterize too deeply or to keep the cautery blade in contact with the tissues for too long a period of time. This type of treatment may also be applied to the cervix of the same type, but with a mild amount of hypertrophy, hyperplasia, and occasional Nabothian cysts. In addition, the cysts are destroyed by the cautery point. For cervices of the same type, but with a large amount of hypertrophy and hyperplasia and cystic degeneration, cauterization is of little or no value, and here, the Sturmdorf operation is recommended. Conization is also very effective in this type of case.

The cervix that presents an eversion must be attacked in a different manner. The cautery and conization procedures are ineffective in this type of lesion, and only surgery will correct the underlying pathology. For the cervix with eversion and no hyperplasia, hypertrophy, or cystic change, trachelorrhaphy is the procedure of choice. For the cervix with eversion and hyperplasia and cystic degeneration, limited to the distal half of the cervix, the Schroeder (low amputation) operation is advocated. For the cervix with eversion, marked hyperplasia and hypertrophy, and cystic degeneration throughout, the Hegar (high amputation) operation is imperative. Of course, dependent upon coexisting pathology and the age of the patient, vaginal or abdominal hysterectomy is resorted to in a number of cases, but a discussion of this does not come within the scope of this paper.

In the treatment of cervicitis, there is a definite period in the menstrual cycle during which it is best and safest to apply therapy. No type of treatment, be it cauterization, conization, or surgery, should be used within ten days of an expected menstrual flow, for there is great danger of spread of infection to the tubes and ovaries, or to the peritoneum, and greater danger of postoperative hemorrhage. We prefer to institute therapy in the period from five to ten days following the cessation of a menstrual period.

Unless great care is taken as to how much tissue we cauterize, or how much carbonization we produce with conization, or to how accurately we approximate tissues following surgery on the cervix, there is a great likelihood of the subsequent development of cervical stricture, a condition which ofttimes leaves the patient in a much worse condition than she was previously, and in some cases, even necessitates another operation[11]. In order to lessen the likelihood of this, it has been our practice to pass a small sound into the cervix at any time from six to eight weeks following treatment, and again one month subsequently, in an attempt to break up any small synechiae that might be present and might later cicatrize into a cervical stricture. We believe this precautionary procedure to be a very important and necessary part of the after care in the treatment of cervicitis.

CONCLUSIONS

1. Leucorrhea is never normal, and when due to cervicitis, the earlier the infective process is combatted by proper therapeutic procedures, the less will be the amount of discomfort to the patient, the less radical will be the procedure necessary to cure, and, I carcinomas of the cervix we will later encounte firmly believe, the smaller the number of carcinomas of the cervix we will later encounter.

2. Cervicitis produces a number of disagreeable and incapacitating symptoms which closely mimic those produced by other organs.

3. Careful pelvic examination, especially with the idea of reproducing the patient's pain, will lead to a larger number of more accurate diagnoses.

4. No one method of treatment is applicable to all cases of cervicitis. Best results will be obtained by applying the proper therapeutic procedures to the particular type of cervix, remembering that it is the degree of laceration and the degree of infection which is the guide in the choice of procedure to be used.

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Arterio-Venous Aneurysm*

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WILLIAM HUNTER first recognized an arterio-venous aneurysm as a direct communication between the artery and vein calling it "aneurysm by anastomosis." All previous observers had considered the lesion a simple aneurysm involving only the artery. Cleghorn (1767) suggested the present name of "aneurysmal varix" for the direct communication and Broca, in [illegible], suggested the name of "varicose aneurism" to the indirect communication by way of a false aneurysmal sac interposed between the artery and vein.

Arterio-venous aneurysms occur rarely in the experience of one physician, as a rule, and, consequently, are too often of only fleeting and academic interest to many of us. The World War, with its large number of vascular wounds, especially arterio-venous lesions, not only increased the clinical opportunities for purely surgical operations and development of new operative methods, but gave a greater insight into the secondary effects of the cardiovascular lesions and led to more intense laboratory research. The local, regional or peripheral effects of arterio-venous aneurysms were classically described by Hunter, but it is in the realm of systemic, central, or cardiovascular effects of arterio-venous aneurysms that great strides in research have been made.

The clinical picture of an arterio-venous aneurysm usually is one of injury by stab wound, gunshot wound, flying projectile, steel, glass, etc., with profuse bleeding which may be easily controlled. A thrill and bruit, continous with the cardiac cycle, frequently develop or may be delayed for several hours or days, probably as result of temporary occlusion by blood clot. If sufficiently large, the fistula will lead to marked systemic effects, such as dyspnoea and tachycardia on the slightest exertion, gradually increased laboring heart with a slowly developing decompensation due to a dilating heart, followed by invalidism and death syncope, or momentary faintness, may be a symptom, as a result of failing circulation.

Matas[3] enumerates the conditions in arterio-venous aneurysms that determine or influence the systemic effects as follows: (a) The size of the arterio-venous fistula; (b) The volume and force of the arterial stream that is short-circuited into the communicating vein; (c) The calibre of the vessels involved; (d) The proximity of these to the heart; (e) The duration of the fistula; (f) The age of the patient; (g) The co-existence of antecedent cardiovascular disease.

Systemic or cardiovascular reactions are most apt to follow aneurysms of the following accessible and surgical vessels: popliteal, femoral, iliac, subclavian, innominate, carotid, brachial, and axillary. The smaller peripheral vessels of the neck and extremities need not be considered. The heart or general circulation is usually unaffected unless the fistula is sufficiently large to allow a stream of arterial blood to go through with sufficient force to overcome the resistance of the venous valves, with the resulting marked varicosities and large pulsating veins.

Patients may be grouped into three classes with reference to the systemic or cardiovascular effects. 1.Local and regional, but no manifest cardiovascular effects. 2. Those with local phenomena, but whose cardiovascular symptoms caused only partial disability and were fairly well tolerated. 3. Total disability with ultimate death as a result of systemic or cardiovascular disabilities. The systemic signs and symptoms of cardiovascular disorder by Matas are briefly as follows. (a) Enlargement of the heart; (b) Accelerated heart rate, especially on exertion; (c) A marked discrepancy between systolic and diastolic blood pressure—high systolic and low diastolic; (d) Remarkable changes brought about by pressure on arteriovenous fistula, namely, diminution in size of heart (reduction of fluroscopic shadow), immediate slowing of pulse and rise in blood pressure; (e) Presence of cardiac murmurs, more often systolic, at the apex; (f) Increased respiratory rate and short-windedness, diminished vital capacity. The distinctive features of an arterio-venous aneurysm as compared with a simple aneurysm are: (a) The continuous thrill and bruit, intensified during systole; (b) Slowing of pulse and rise in blood pressure following closure of fistula; (c) The high oxygen content of arterial blood withdrawn from veins distal to fistula as compared to venous blood obtained elsewhere.

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*Read before the Delta Medical Society, Rosedale, Miss., April 13, 1938.

Treatment of an arterio-venous fistula is surgical, generally. If seen early, the patient should be hospitalized and if the bleeding ceases and hematoma does not continue to enlarge or infection develop, delay in operating is advisable. Nature may eliminate the fistula by thrombosis and fibrous contraction around the abnormal opening. If, however, the size of hematoma increases, threatening the blood sup ply to the parts beyond it, immediate operation is necessary. Operation is best performed with bleeding checked by tourniquet, the hematomas evacuated, debridement done, if necessary, and end to end, or lateral suture of the artery attempted, if no infection is present. The vein should be ligated to avoid the danger of an embolus, either of air or blood clot. Quadruple ligation of vein and artery is done, if repair is not feasible. If evidence of infection be present, quadruple ligation is done and the wound left open and irrigated with Dakin's solution or hypertonic saline solution.

Delay in operating on a fistula, where feasible, is good judgment not only because nature may heal the small fistula, but because collateral circulation is allowed to develop, the danger of infection is decreased, and the injured vessel walls become more thoroughly healed. However, delay may bring marked cardiac decompensation and the fistulous opening may enlarge, making repair of the arterial wall more difficult.

Certain fundamental principles must be observed in operating on blood vessel lesions. Differentiation between a simple sacculated aneurysm and an arterio-venous fistula must always be made, for ligature of an artery alone, proximal to a fistula, may result in loss of life from a resulting gangrene, due to the great disproportion between the dilated tortuous venous system and the meager arterial circulation. The little blood that passes through the collateral arterial bed finds its way promptly into the dilated venous bed without flowing into the distal arterial bed. Matas has recorded the production of a marked ischemic paralysis and partial gangrene of forearm and hand as the result of ligation of the subclavian artery and restoration of the subclavan artery and restoration of the vein. Brooks[16] states that it is not **always** necessary to ligate the veins, and states that the prevention of gangrene must be balanced with the possible remote effects of chronic venous stasis. He states that in sudden arterial occlusion, as may occur in surgery or from traumatism, ligating the veins is most valuable. He believes that ligation of the axillary or popliteal artery probably calls for simultaneous ligation of the vein, but, with femoral or brachial arteries, he considers that it makes very little difference. Pemberton and McCaughan[14] suggest the use of the Henle-Coenen test to determine the need for simultaneous ligation of the accompanying vein. Quadruple ligations of the artery and vein is the safest and most effective method of dealing with an arterio-venous aneurysm.

Absolute asepsis and hemostasis with thorough anatomical dissection of tissues are necessary in the surgery of the vascular system. If the surgery is elective, a time should be chosen when no active infection of any kind is present· as a temporary bacteremia may be present from a furunculosis, respiratory infection, pyorrhoea, etc., and the bacteria may come to rest in the traumatized area. Absolute hemostasis is obtained by the use of a tourniquet or the application of tape ligatures. The decision as to the type of surgery to be done will depend on the condition of the blood vessels. Excision of the sac, leaving a small elliptical piece of sac in the arterial and venous fistulae, with closure by interrupted Lembert sutures, is sometimes feasible. Matas' principle of endo-aneurysmorrhaphy, which consists in incising the dilated vein and suturing the arterial rent, is an excellent procedure where the fistula is recent and there are no degenerative changes, arterio-sclerosis, or calcium deposits in the rim of the fistula. Where the position of the sac allows it, the sac may be opened, the arterial and venous rents closed and the roof of the sac sutured down over the closure, strengthening it. Closure of these incisions, where suture of the fistula has been done, must always be made without drainage. Packing and drainage in surgery of vascular wounds invites almost certain disaster. Should the wound fill up with serum, evacuation is a simple matter. Postoperatively, it is very important to keep an extremity warm, in the face of impaired circulation. Matas has stressed this fact—that a limb would live if kept warm and would become gangrenous if allowed to become chilled.

The situation, duration and size of the arterio-venous fistula determine the effect on the cardiovascular system, and excessive dilatation of the heart and beginning cardiac failure must be taken into consideration before surgery is attempted. Closure of the fistula may cause a greater dilatation of the heart with a greater thinning of an already attenuated cardiac muscle, and may be sufficient to produce an actual decompensation. It has been experimentally proved that there is an increased volume of blood in the presence of fistula, so venesection may be indicated here. Prolonged convalescence in bed is indicated, following an operation for large fistula, in order to allow the damaged myocardium to adjust itself to changed diastolic pressure, etc.

Case Report: Clyde Ellis, colored, age 21, admitted to hospital June 13, 1937, with gunshot wound of right shoulder and arm. Shot with 22 rifle, point of entrance about 1½ inches from insertion of clavicular head of pectoralis major muscle. Bullet could be felt on posterior surface of arm just outside outer margin axillary space and about 2½ inches from shoulder joint. Patient complained of severe pain. Bleeding was profuse for a short time but was controlled by pressure. There was considerable discoloration of the skin over areas of insertion of deltoid,, pectoralis, major and triceps muscle, and gradual increase in size of the arm around the joint and in axillary. The pulse was fair. The swelling gradually receded. The patient complained of some numbness and loss of sensation of 5th and 4th fingers on discharge from hospital, June 19, 1937. Patient readmitted to hospital August 2, 1937, complaining of pain in right axillary space, referred down arm, on slightest exertion. Patient had begun to do some work about 10 days prior to admission and a few days prior to admission had attempted to catch a pig and hold it. Arm began to hurt then and had noticed pulsation in axilla. Complained of heart beating fast if exercised. Examination of axilla showed tumor presenting in axillary space near the thorax, about size of English walnut. A continuous pulsating thrill was present, more pronounced in systole. Auscultation revealed a loud continuous murmur. Deep pressure caused the thrill and bruit to disappear. Blood pressure was 110/62, but systolic rose temporarily 10-15 points on pressure over mass. Diastolic pressure showed very little change. Incision over mass revealed arterio-venous aneurysmal sac, somewhat larger than thumb, which was presenting through the axillary vessels, the sac was freed, the base being attached to the axillary artery and vein. While manipulating the sac in endeavor to determine attachments, etc., the sac was detached. An effort was made to do an end to end anastomosis, which was not successful due to tension, and quadruple ligation of the artery and vein was done. Healing was uneventful. The arm was cold but was kept warm and normal color gradually returned. Partial loss of sensation in 4th and 5th fingers gradually decreased. Last reports November 15, 1937, showed some loss of sensation of 5th finger.

Conclusion

1. In the presence of infection, if vascular surgery is necessary, quadruple ligation and excision of sac, with free drainage and irrigation is indicated.

2. Surgery should be delayed if the bleeding ceases and there is no evidence of developing infection and no increasing swelling of limb, with resultant danger to blood supply below injury.

3. Nature closes some small fistulae by thrombosis and fibrous contraction.

Delay also allows collateral circulation to develop and decreases danger of infection.

5. Arterio-venous fistulate may cause total and ultimately fatal disability if allowed to continue.

6. The ligation of artery and restoration of vein is indefensible.

7. Simultaneous ligation of vein with artery is frequently necessary, with exception noted. Henle-Coenen test is of great assistance in selection of cases.

8. Requisites in elective surgery of vascular system are: (1) Absolute sepsis. (2) Absolute hemostasis.

9. Operative precautions, such as venesec-

tion, may be necessary in the presence of impending cardiac failure.

10. Evidence of impaired circulation, cold skin and absent peripheral pulse, require warmth to combat gangrene.

11. The use of drainage and packing in the surgery of large vessels is to invite disaster. To prevent infection, drainage must be scrupulously avoided.

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THE MISSISSIPPI DOCTOR

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Published monthly at Booneville, Mississippi

Annual subscription $1.00.

Entered as second-class matter, January 19, 1926, at the post-office at Booneville, Miss., under the Act of March 3, 1870.

The people in the rural communities and the small towns deserve the best medical care they are able to utilize. To make this possible it seems that the government will have to assist as they do in furnishing other necessities.

If brotherly love leads the way surely there can be a meeting place where the medical profession and the government can come to the rescue of the sick of limited means without the sacrifice of medical ethics or the embracing of political dictation.

Above everything else it seems to us that a patient should be allowed to choose his doctor, his nurse, his dentist, his hospital and pharmacist. This is medical democracy.

Dr. Willis Campbell of Memphis is spending several weeks in Europe and along with him his two sons. He is being graciously received by the medical fraternity. Dr. Campbell is one of the well-known orthopedic surgeons of the world.

To think that we shall have fewer people on relief in the future is the height of optimism. Mass production, mental inefficiency, the lack of moral stamina, the keener competition for the economical survival of the fittest do not point in this direction.

Because of their low scale of living some people cannot utilize very much medical care. It is not practical often times to prescribe loads of high priced medicine when the patient is so poorly housed, clothed, and fed.

We deeply appreciate the new one-half page ad from the Greenville Hospital, located in one of the most wonderful small cities we know over on the banks of the Father of Waters which is soon to be, it seems, one of the chief gateways to the Southwest. This hospital, with its medical and nursing staffs, is an outstanding credit to Mississippi and the Mid-South.

Dr. and Mrs. Gilbert F. Douglas of Birmingham entertained at their home, 212 Mecca Ave. (Edgewood), in honor of Dr. Quitman U. Newell and Dr. Seale Harris o nAugust 1 from five to seven p. m. Dr. Newell held a Gynecological Operative Clinic at the Hillman Hospital during the morning. He is Professor of Gynecology at Washington University, St. Louis. Dr. Seale Harris is distinguished in internal medicine in the mid-South and is president of the Alabama State Medical Association, two very outstanding men of the profession.

The Houston Hospital had a very elaborate celebration on its 18th anniversary. It was good to be there. Dr. Seale Harris, Birmingham, and President Joe Green, Laurel, were the chief guest speakers and this means that something was said and said well. North Mississippi's master orator in the field of women eulo-ology presided as toastmaster, Dr. Walker, of Houlka. The Houston Band was arrayed in full uniform and shining splendor of instruments and played as no other band could on this occasion. It played with the spirit of gratitude that permeated the people there and round about for the fine medical and surgical service brought to their very door by this hospital over the period of years. The hospital has a capacity of about fifty beds; it is newly decorated from top to bottom in elegant style and with due regard to service for the patient. Every room is equipped with an adjustable bed and a beauty-rest mattress. Drs. Philpot, Williams, Armstrong and Crocker are the doctors in charge at the hospital. The editor appreciates his invitation to this celebration.

You will note the hospital map in this issue of the journal, and the names, location, and superintendents of each institution. This is a wonderful hospital set-up for our state. The distribution is not quite as good as it should be, some sections being a bit overloaded and some not quite as convenient to hospital service as they should be. These adjustments will gradually take place, we believe. We should have a well equipped up-to-date one-hundred-and-fifty-bed hospital at Jackson, Mississippi, where radium therapy and deep x-ray may be had, a division for contagious diseases and ample space to take care of our cripples. With this institution, the Mississippi State Hospital, the State Board of Health, and the Sanatorium, we could offer a first class internship of two years that would educate our men to serve well here in their own state. Our other four state hospitals for the indigent could be operated by the towns in which they are located with their share of the per capita distribution with additional funds from the town and county, or the private hospitals could take care of their own charity as it is being done largely throughout the state. The latter would be the best plan, we think, but this should be left to the doctors of each county to decide. There have been very good practical reasons for zoning the indigent patients to some hospitals in our system, but this should not continue, the necessity for it should not. Every patient should be left perfectly free to chose the doctor, nurse, hospital, pharmacist and dentist that he desires. If we stand by this principle we can have state aid without state medicine. Mississippi with its hospital set-up has the greatest means of carrying modern medicine to the masses at a reasonable cost of any state in the Union. We should feel proud of what we have, but should not be satisfied until it is more perfect. When the indigent sick out on the cross roads and down by the mill in a rural state like Mississippi can have free hospital service, can select the hospital and the doctor he choses, as he can in our state, it is an accomplishment that should stimulate the pride of every member of the profession and every citizen. The small hospital is a great aid to the practice of co-operative group medicine and to the best interest of both the profession and the people.

We have talked about "state medicine" for a long while just like we have the weather, but it seems now that the time may be near at hand for sincere, honest, unselfish thinking and decision. The medical profession should know the facts and meet the issue in the interest of the people. There is a difference of opinion as to the adequacy of medical care for the masses. It seems to be very well agreed that if one person deserves to have adequate medical care then it should be available to all, not necessarily the same amount, but what each person can utilize in his environment. A man with only one hickory shirt cannot utilize a half dozen silk ties to a profitable advantage, and it would not be good health economy to pay large sums of money for high powered medicine for people who first need meat and bread and pot liquor, comfortable clothes, and a house to protect them from the weather. But we believe that it is good human economy for every person to have the medical care he needs and can utilize. In the small town and rural community in the South it is quite certain that many people are unable to pay for the medical service that they need and it is equally true that the medical profession is not financially able to supply all the service that is needed, free of charge, not for a very long while. Some think that financial conditions will improve and we will not have conditions as they are very much longer, but in this age of mass production with so much wealth in the hands of so few, this hope is far fetched. If a larger per cent of the people had the money with which to pay, then our problem would vanish no doubt. But in many sections in the South there is no hope of enough income to pay for the best medical care and will not be for years to come, if ever. We did try to build roads across the country by the supervisor's beat plan. This plan would not work. Now the national government builds just the same roads across the poor section as across the rich land. This is good road economy. It is imperative. Health for all the people is imperative lest we have it for no one. Preventive medicine and preventive surgery is the order of the day. The job is big enough for all the profession, every single man. The entire profession should be enlisted in carrying adequate care to the masses. But unless we are to court, give in marriage, educate, die and be buried by number, the relation of the doctor and the people should not be disturbed. If it is the people may not have as good medical care although they have millions more in money. Money will not do it all. The personal interest and advice is something that cannot always be bought with money. Every doctor should have an equal opportunity to utilize his knowledge for the good of the people. Every person should always be free to select the doctor, the hospital, the nurse, the pharmacist and the dentist he desires. The medical profession and the people should "sink or swim, live or die, survive or perish" on this principle. There is a meeting ground on this question where the majority of the profession and the masses of the people can be benefited if we only seek it earnestly and unselfishly.

Dr. J. L. Jelks of Memphis is spending some time in New York City and other points of interest on his vacation. He is one of the corner stones of the profession in the medical fraternity of Memphis. His work has stood the test of time and is more appreciated than ever before. We wish him a happy vacation.

Don't forget to be nice to our advertisers. We deeply appreciate their co-operation.

This journal deeply regrets the passing of Dr. A. P. Alexander, of Como, Miss. Dr. Alexander was born and reared in Prentiss County. He was a magnetic personality and a most lovable man. He was well trained and an expert in the application of the information in hand. He was a man of fine poise and splendid diplomacy. Dr. Alexander was not only an able practitioner, but he was a splendid business man, and coupled with this, a fine progressive citizen.

Anyone wishing a reservation for the Oklahoma City meeting should write to Dr. P. M. McNeil, Chairman, Hotel Committee, Ninth Floor, Commerce Exchange Building, Oklahoma City. Oklahoma. In writing for reservation one should indicate the hotel of his choice, the kind and price of accommodation desired and the day and time of day he expects to arrive at Oklahoma City. The Southern Medical Association meetings opens Tuesday morning, November 15 (sessions beginning at 10:00 o'clock) and closes at noon on Friday, November 18.

The Farm Security Administration (whatever that is) seems to be trying to organize the doctors of the various counties so as to get medical care for its clients. This is a praiseworthy undertaking, however, the plan submitted is, in my opinion, very questionable and will surely prove unsatisfactory wherever it may be put into effect. Three suggestions or principles are submitted. These suggestions are plausible when considered casually, but they will not stand careful analysis. They are about as follows: First, each client shall be advanced such amounts as it may appear that he can repay. And the spending of this money so advanced shall be under the supervision of certain representatives of the Administration—this sum shall be budgeted so as to provide certain necessary things, such as clothing food, feed for livestock, farming utensils and implements and last but LEAST, medical attention and drugs. The amount budgeted for medical care is pooled and placed in the hands of a bonded trustee and divided into twelve equal amounts to be used in paying bills that accrue during each consecutive month. These clients are permitted to select any doctor they may prefer. The doctor so selected is to be the sole judge as to what procedures and treatments are necessary for each individual case of sickness or injury. He is permitted to fix his own charge. But a committee (possibly consisting of doctors) inspects these bills and approves or disapproves them. They are then submitted for payment. And each doctor is paid, either in full or in part, according to whether the budget for that month is sufficient to pay all or a part of all bills. If bills cannot be paid in full for any month the amount not paid is held in abeyance until the end of the current fiscal year and if there remains any unused money it shall be prorated among all doctors who may have money still due. But let us look deeper into the proposal and illustrate by Monroe County. In this county there are two hundred clients and the average family consists of six individuals—this means that there are 1200 individuals to be cared for during the twelve months. The money budgeted and pooled to be used is split up into certain parts. Certain amounts are first set apart to pay for drugs used or prescribed and to care for "emergencies" (a most illusive term). And finally and to the point, exactly two dollars per individual is expected to furnish medical care for the entire year. What a princely compensation. The argument is brought forward that this is not contract practice—therefore does not violate any ethical feature or phase of medical practice. Nevertheless, there is no possible chance for more than two dollars per individual to be collected and it must not be forgotten that any pooling of assessments (whether large or small) is regarded and IS unethical. Unethical because it is unfair to any who may contribute to the pool and yet may receive no benefits. The A. M. A. has definitely so decided. While after many years and much discussion this organization has decided that pooling for **hospital** expense alone may be passed over with a wink, still no part of medical care may be so paid or collected. Leaving these facts out of consideration, no one with any knowledge of human nature doubts that every single individual will demand his or her "money's worth" during the year. Having paid it in some occasion will present when two dollars worth of service will be demanded. Again when any family shall have received its twelve dollars worth of service and more is needed, demand will be made for further service, and if it is denied a great howl will go up—not only from those needing the service but from all who have contributed to the pool. So there is no getting around the fact that this proposal is for a contract to do a year's service for two dollars per year. Again it is an unfair and inhuman proposal in that only the most stable and dependable among the indigent poor are so favored while those who are not considered and proven to be worthy of credit are given consideration in this plan. Doctors certainly would fare better if no part of this money advanced should be pooled. These people will pay for medical attention without its being held out and paid by some one else if it is humanly possible. They appreciate their family physician and will pay him more money if left on honor than the two dollars per individual. This has proved true in this county. I, personally, know doctors who have told me that this is true and they oppose the plan because they know that once a man goes into the pool he will not pay more. So much for that feature. Now let us look further: In Monroe County there are about thirty-five thousand people. There are not less than twelve thousand of these that are indigent and cannot possibly pay a doctor. Of these only twelve hundred are included in this proposal. Those whose credit is questionable are left severely alone and are told to "root hog or die." The doctors of the county—twelve—are expected to care for these with no hope of getting any remuneration, while the twelve hundred whose credit is fair and who would willingly pay their doctor if they are left out of this iniquitous and unethical pool are palmed off on the doctors for **two dollars** per year. Doctors, do you want to hasten state medicine? Do you want third parties—laymen, mostly politicians or the servants of politicians, to regiment you and take over your birth right of running your own professional affairs? Do you want to cast off every vestige of ethical practice? If so, remove your names from the rostra of ethical and honest medical organizations and turn yourselves over to be "dumb driven cattle." As for me now and forever, I say NO.

G. S. B.

COMING MEDICAL MEETINGS

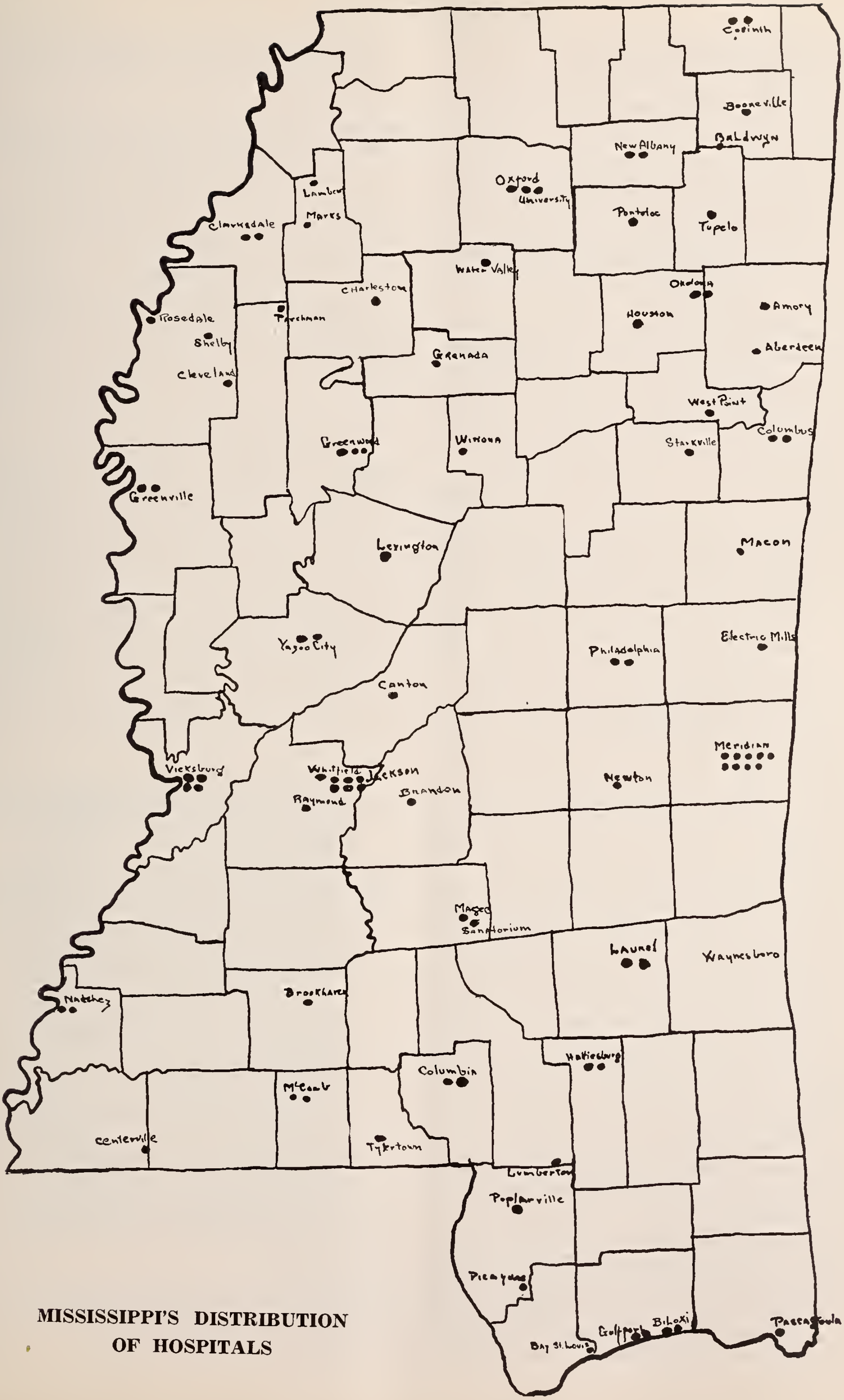
Mississippi Valley Medical Society.—Hannibal, Mo., September.

International College of Surgeons.—Philadelphia, Pa., October 13, 14, Bellevue Stratford Hotel.

American Association for the Study of Goiter.—Washington, D. C., September 12, 13, 14.

Southern Medical Association.—Oklahoma City, Oklahoma, November 15-18.

Don't hold a grudge. If the man is mean, it's too great a compliment to him to waste time hating him.—The Speakers Library.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Columbus, Columbus Hospital, Dr. T. F. Wolford; Fite Hospital, Miss Beulah W. Fite, R.N.

Corinth, Corinth Hospital, Mrs. B. T. Whitfield, R.N.; McRae Hospital, Dr. H. M. McRae.

Electric Mills, George C. Hixon Memorial Hospital, Dr. A. M. McCarthy.

Greenville, King's Daughters Hospital, Miss Mary E. Dorsey, R.N.; Colored King's Daughters Hospital, Dr. A. V. Murry.

Greenwood, Greenwood-Leflore Hospital, Miss Mary H. Trigg, R.N.; Greenwood Colored Hospital, Dr. F. M. Sandifer, Jr.; Victoria Butler Colored Hospital, Dr. R. B. Yates.

Grenada, Grenada Hospital, Dr. J. K. Avent.

Gulfport, King's Daughters Hospital, Miss Maude L. Howell, R.N.; Veterans' Administration, Dr. Geo. M. Melvin.

Hattiesburg, Methodist Hospital, Mr. H. Ogden; South Mississippi Infirmary, Dr. W. W. Crawford.

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Jackson, Jackson Infirmary, Mrs. T. B. Tatum, R.N.; Mississippi Baptist Hospital, Mrs. Karenza Gilfoy; Mississippi State Charity Hospital, Dr. Toxey E. Hall; Walley's Hospital, Dr. Willis Walley; Fraternal Hospital for Colored, Dr. C. B. Christian (col.); Community Hospital, Miss Beatrice Dodson, R.N.

Laurel, Laurel General Hospital, Mrs Maude E. Varnado, R.N.; South Mississippi Carity Hospital, Dr. Thos. R. Beech.

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Parchman, Sunflower Hospital, Dr. J. W. Moody.

Pascagoula, Jackson County Hospital, Miss Esther Suirua, R.N.

Philadelphia, Choctaw Indian Hospital, Mr. A. C. Hector; Philadelphia Hospital, Dr. C. H. Harrison.

Picayune, Martin Sanatorium, Dr. V. B. Martin.

Pontotoc, Pontotoc Clinic, Dr. T. H. Rayburn.

Poplarville, Poplarville Hospital, Miss Lois Nobles, R.N.

Raymond, Hinds County Tuberculosis Hospital, Mrs. E. O. Henderson, R.N.

Rosedale, The Rosedale Hospital, Dr. L. B. Austin.

Sanatorium, Mississippi State Sanatorium, Dr. Henry Boswell.

Shelby, Hall Hospital and Clinic, Dr. Wesley W. Hall, Jr.

Starkville, Oktibbeha Hospital, Dr. F. B. Long.

Tupelo, North Mississippi Community Hospital, Miss Helen Branham, R.N.

Tylertown, Tylertown Hospital, Miss Margie Boyles, R.N.

University, University Hospital, Dr. J. C. Culley.

Vicksburg, Mississippi State Charity Hospital, Dr. E. H. Jones; Vicksburg Hospital, Dr. W. H. Parsons; Vicksburg Infirmary, Dr. B. B. Martin; Vicksburg Sanitarium, Dr. L. S. Lippincott.

Water Valley, Water Valley Hospital, Dr. G. A. Brown.

Waynesboro, Waynesboro Clinic, Dr. W. P. Gray.

West Point, The Ivy Hospital, Miss Carrie Young, R.N.

Whitfield, Mississippi State Hospital, Dr. Chas. D. Mitchell.

Winona, Winona Infirmary, Dr. E. W. Holmes.

Yazoo City, King's Daughters Hosp., Miss Roberta Prewett, R.N.; Afro-Ameerican Hospital for Colored, Dr. L. T. Miller (col).

DR. HARVEY GARRISON, SR.

Dr. Harvey Garrison Sr., Jackson, Miss., who has been appointed Chairman of the American Academy of Pediatrics for the State of Mississippi to serve for one year by the president. This is a great honor bestowed by this National Society, but it is well and worthily placed. Dr. Garrison has done much for pediatrics in the State of Mississippi. He has outstanding ability as a leader and as an organizer. He proved this while serving as president of the Mississippi State Medical Association. He is a prominent member of the Council Medical Association and establish inaugurated the annual meeting of the presidents of the state medical societies along with the president-elects, the secretaries and the editors. This organization will prove of great value in helping to solve our medical problems no doubt. We congratulate Dr. Garrison on receiving this distinction in his specialty. He will discharge the duty with distinction.

Notes and Observations On Health Subjects

Made In South Africa In 1937

By W. A. EVANS, M.D.

DIFFERENTIAL BIRTH AND DEATH RATES

The native or negro population in South Africa is many times as great as the white population. The policies of the country are based on an assumption of white domination far more so than is the case in other parts of the world. In the Southern United States and in those sections of the Northern United States where a large negro population threatens white domination they have a racial policy that is far less compelling than that which prevails in Africa. In that country the reds, yellows and browns are grouped into a third class called colored. They have a well developed policy toward the colored class based also on the plan of white domination. The whites are designated Europeans just as the negroes are designated as natives. Just as the United States Government in the Canal Zone gets around certain legal limitations by calling whites Gold Roll and negroes Silver employees. Among the so-called Europeans in Africa there is a threatening racial rift, one that just now endangers more than does the native menace. The Europeans are loosely classed into British composed of all persons of English, Scotch and Irish derivation and the Afrikanders composed of descendants of Holland and all other European stocks except the British.

All Europeans have equal use of the ballot. The Afrikanders far outnumber the British. In consequence they have most of the officers of every grade and kind. The country is under British protection. The British group are said to get most of the rich plums in finance, business economics and business organization and opportunity. There is considerable ill feeling between the two groups. The Afrikander group considerably outnumbers the other group. I was interested to know which group was increasing faster, by excess of births over deaths and by excess of immigration over emigration. The Registrars of Vital Statistics from Dr. Carothers, the National Registrar, told or wrote me that they did not know the answer to these questions, that none of their reports gave the desired information and their certificates and tabulation of statistics were not designed to supply the answer. However, although proof was lacking the universal opinions of registrars, health officers and physicians was that the Afrikander population is increasing more rapidly than the other. Their birth rate is enough higher than that of the British group to more than offset any advantage the latter might have in death rates.

TYPHOID FEVER

It was the British authorities working in South Africa who demonstrated the advantage of mass vaccination of large population groups against typhoid. Nevertheless, having heard that typhoid was brought to America from Africa, I was prepared to find the disease quite prevalent in the latter country. Doubtless it was once, but not so now, thanks to widespread vaccination. In some quarters I found that they did not use mixed vaccines containing paratyphoids. Those who did not vaccinate against the paratyphoids thought they were too unimportant to make vaccination against them worthwhile.

In some quarters one dose of vaccination against typhoid was being tried out. The statement was that the protection given was not as complete as where the three dose method was used. The rule is to use the three bacteria given in three doses.

I did not learn much about the treatment of persons sick with typhoid since the methods are those in general use elsewhere. They feed more liberally, are less afraid of complications than thy were before introduction of the Coleman diet.

MENINGITIS

The mining industries are greatly afraid of meningitis among their employees. Conditions make for epidemics of meningitis among such groups. The men live in large communities in dormitories, barracks and compounds. In the main they are robust young males. The cold is quite disagreeable at night and in the early morning. Much of the underground work is done in air which has a high humidity. Under these circumstances the fear of menigococcus menigitis is justified. In most of the industries vaccination against meningitis is compulsory. This is done at the time the employees sign in. In many of them compulsory vaccination at the time of hiring is not required because vaccination against other diseases is thought to be more important. However, if clinical meningitis appears in a community compulsory vaccination for the time and occasion is enforced. They prefer vaccines made from locally grown meningococci, but they import other strains and experiment with them. In the Medical Research Institute at Johannesburg against the epidemiology of meningitis they frequently use serums. They expressed preference for those made with bacteria locally and recently found.

SLEEPING SICKNESS

What is known in the United States as sleeping sickness has no relation to etiology symptoms, treatment or anything else to the disease sleeping sickness of Africa. Since African disease is the older disease and bore the name "Sleeping Sickness" long before the European disease was so designated the latter should be given another name. An additional reason for changing the name of the disease which prevails hereabouts is that it often does not cause sleeping—in fact it sometimes causes mental alertness, irritability and wakefulness and the term sleeping is misleading. In certain parts of Africa sleeping sickness is widely prevalent among natives and Europeans and among animals both vild and domesticated. It is the one disease to which Europeans and natives are about equally susceptible and to no other disease of man are animals so susceptible.

It is due to a blood parasite which is conveyed from host to susceptible individuals by a fly, the tsetse.

This relationship is well known and most of the measures for control of the disease are based upon that knowledge. Incidentally none of these epidemiologic measures is proving satisfactory.

The natives are very susceptible to sleeping sickness. The villages in the bush are generally located on well wooded streams for reasons readily understood and it is almost impossible to get rid of flies in such areas. Since the natives in the bush have little competent medical care when they become infected with sleeping sickness they generally die from it after a prolonged illness. The specific arsenicals of which there is more than one on the market are curative. When white men get the disease, have an early and correct diagnosis and get proper treatment promptly, recovery is to be expected. Where treatment is delayed or inadequate, sure is unusual. In the nature of things not much is expected of the kind of treatment the natives get.

THE DIARRHAES

Bacterial dysenteries are rather more frequently encountered than are those of amoebic origin. The natives have nearly four times as much amebic infection as the Europeans. But they also have more bacillary dysentery. Their food and drink habits easily account for the prevalence of both kinds of dysentery. The amoeba responsible for amoebic dysentery is the entamoeba histolytica. Diagnosis of amoebic dysentery is not so easy as one thinks. In some cases the organic is not found in the stools even though no purgative has been used. The specimen is fresh and the microscopic methods used are up to standard, nor can local examination always be depended on. Diagnosis between the two forms by symptoms alone is apt to be incorrect.

YELLOW FEVER

This disease only prevails in a small area on the west coast of Africa. Why it does not prevail in nearby regions where there is the same vegetative and the same insect life is not easily understood. Where it does prevail the disease is generally quite mild and in the native population. It rarely produces the destruction of kidney and liver cells that are so characteristic pathologically of the disease among Europeans. In fact its very mildness clinically among natives increases the difficulties of epidemiologic control. The laboratory discovery of means of specific diagnosis treatment and vaccine prevention of yellow fever has robbed the disease of much of its terrors. The symptoms by which it was diagnosed in former years were often absent or subject to wide variance in interpretation. The present armamentarium of the medical man removes most of the uncertainty of diagnosis and makes prevention and cure far more satisfactory. Furthermore yellow fever has never caused epidemic conditions in any part of Africa comparable to those which so often prevailed in the Southern States prior to 1880.

In spite of all these facts the African authorities in 1937 were considerably agitated about yellow fever. The apprehension was due to increasing use of airplanes and short duration of the trip now from yellow fever infested parts of Africa to other parts of the country in which the mosquito set up is proper for the spread of yellow fever.

We too have felt some apprehension on this point. No experience up to the present has shown us that this fear was justified either in Africa or America.

The same can be said of the apprehension in this country and Africa about dangers of Bubonic plague under greatly improved transportation.

DR. R. L. SANDERS

Dr. R. L. Sanders of Memphis, who was chosen as president-elect of the Southeastern Surgical Congress at its last session. This great association made no mistake in selecting Dr. Sanders. The honor was worthily and well bestowed. He has native ability, is thoroughly trained as a surgeon, able as a consultant, and active as a progressive Christian citizen. Dr. Sanders brings this honor to a city that richly deserves it as an outstanding and steadily growing medical center.

Banquet Eighteenth Anniversary Houston Hospital and Staff Meeting, July 19, 1938, Houston, Mississippi

GUESTS THRONG HALL AT HOUSTON HOSPITAL ANNIVERSARY FETE

"In my opinion, the people of this community are receiving as good medical care and hospital attention as those in any medical center in the country," Dr. Seale Harris, eminent Birmingham specialist, declared Tuesday evening to a banquet crowd of nearly 200 joining in the celebration of the eighteenth anniversary of the Houston Hospital.

Dr. Harris' address was the principal feature of a banquet program during which was heard repeated praise of the hospital, its work, and staff. Guests gathered in the Masonic hall included medical society officers, physicians of the surrounding territory, stockholders and early promoters of the hospital, and a group of local citizens.

Culmination of the program was the reading by Dr. E. K. Guinn, McCondy, of a voluntary resolution signed by 45 doctors throughout this section expressing appreciation of the medical profession for the service and co-operation of the hospital. The resolution and names are printed in full in this issue of The Times-Post.

From left to right: Mrs. Earl Edwards; Mr. Earl Edwards, Houston, Secretary, Chamber of Commerce; Mrs. W. H. Anderson; Dr. W. H. Anderson, Booneville, Editor of THE MISSISSIPPI DOCTOR; Dr. Seale Harris, Birmingham, Alabama, President of the Alabama State Medical Association, Former President of the Southern Medical Association; Dr. W. C. Walker, Houlka, Toastmaster; Dr. J. Rice Williams, Houston, Roentgenologist, Houston Hospital, Speaker of the House of Delegates, Mississippi State Medical Association; Dr. Joe E. Green, Laurel, President of the Mississippi State Medical Association; Mr. Ashton Toomer, Houston, Mayor, Secretary of Houston Hospital; Mrs. Ashton Toomer; Dr. C. D. Davis, Trebloc, originator of a hospital in Houston as early as 1912; Mr. John E. Hill, Houston, Vice-President, Houston Hospital.

Toastmaster for the occasion was Dr. W. C. Walker, beloved Houlka physician and one of the ablest orators of the profession. He introduced the various speakers and interspersed the program with humorous anecdotes and comments.

Mayor Ashton Toomer, secretary-treasurer of the hospital, extended greetings to the guests in a briew welcome address.

Dr. W. H. Anderson, Booneville, editor of THE MISSISSIPPI DOCTOR, responded to the welcome on behalf of the doctors and other guests.

Dr. J. Rice Williams, member of the hospital staff, introduced the first guest speaker of the evening, Dr. Joe E. Green, Laurel, president of the Mississippi State Medical Association.

Dr. Green appealed to the doctors to strive toward better co-operation with each other and to encourage young doctors starting out in their communities, stating that unless the profession itself assists in starting men in areas which need medical care, socialized medicine will eventually come in to do the job.

Highly commending the existing local evidence of co-operation between community doctors and the Houston Hospital, Dr. Green said, "There is not another institution in the state where doctors are so nearly unanimous in cooperation and support."

In a non-technical address designed to be of interest and benefit to both laymen and doctors, Dr. Harris outlined a few simple, but important observations on methods of attaining good health and longevity. He emphasized the necessity of abstinence or temperance in use of alcohol and tobacco, the importance of a sense of humor, and the desirability of banishing worry.

"If people knew and practiced the rules of simple hygiene," Dr. Harris said, "they would undoubtedly live much longer than they do."

Miss Ruth Carter, superintendent of nurses, responded to compliments paid by several to the nurses. She expressed the appreciation of the nurses for the help and encouragement of the doctors.

The toastmaster introduced for brief remarks W. A. Rush, president of the Exchange Club; Earl Edwards, secretary of the Exchange Club and of the Chamber of Commerce; and Mrs. J. C. Beasley, county superintendent of education, Dr. Williams read telegrams expressing regret of their inability to attend from Rush Knox, president of the hospital, and Mrs. E. P. Wilson, wife of the late Dr. E. P. Wilson, one of the promoters of the hospital.

Dr. B. J. Shaw, Slate Springs, introduced the hospital's first patient, Miss Dixie Doss.

Dr. V. B. Philpot, director of the hospital, who was repeatedly singled out for individual praise by various speakers, expressed the appreciation of the hospital's staff for the manifestations of gratitude and commendation.

Assigning proper credit to the original promoter of a hospital in Houston, Dr. Philpot introduced Dr. C. D. Davis, Trebloc, who in 1912 was instrumental in beginning the first hospital, on the second floor of a building on the west side of the square.

Dr. Philpot also introduced Mr. John W. Hill, an original promoter and longtime officer of the hospital, designating him as the man who has been of the greatest financial and moral assistance in the promotion and growth of the institution.

The banquet, which was served under the direction of Mrs. Bess Hill, followed a parade and concert by the Houston High School Band in front of the hospital. The band rendered a program of several numbers in the banquet hall.

Vocal music for the program was furnished by a duet composed of Miss Ella Mae Gladney and Miss Kate Shaw, of Houlka, accompanied by Mrs. W. C. Stewart, also of Houlka.

DELTA MEDICAL SOCIETY PROGRAM

To be presented October 11, 1938.

"Elliot Treatment of the Pelvis."—S. L. Lane, M.D., Hollandale, Miss.

"Atebrine in Malaria."—B. H. Booth, M.D., Drew, Miss.

"Skin Diseases Commonly Encountered in Infancy and Childhood."—R. E. Wilson, M.D., Greenwood, Miss.

"Perforated Peptic Ulcer."—W. W. Hall, M. D., Shelby, Miss.

"Some Unusual Tumors of the Ovary."—Randolph T. Smith, M.D., Little Rock, Ark., Guest Essayist.

The above is a fine program and the Delta Medical Society certainly knows how to entertain. Make your plans to attend this meeting.—Ed.

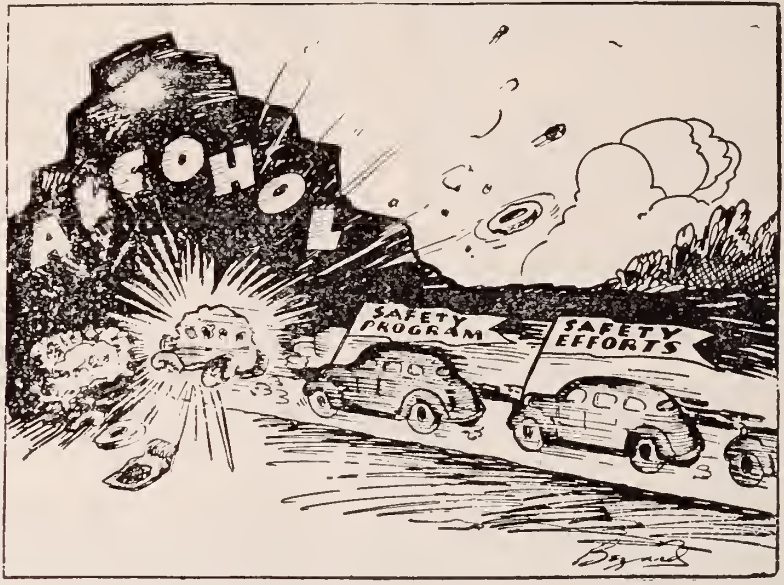
ALCOHOL—THE GREAT OBSTRUCTION ON THE ROAD TO SAFETY

R. N. Whitfield, M.D.
State Director, Vital Statistics

Tons upon tons of safety literature have been broadcast throughout the land. Millions of lines on safety have been printed in magazines and in the press all through the nation. Thousands of safety messages have been spoken from platforms and over the radio; and yet automobile slaughter is scarcely diminished in volume throughout the United States.

It is the opinion of this writer that the leading cause of automobile deaths in this nation has been greatly minimized. We harp too much on "reckless" driving and fail to harp on the outstanding **cause** of reckless driving, which is ALCOHOL.

THE GREAT OBSTRUCTION!



It is true that **drunken** driving is receiving general condemnation and fairly general punishment; and yet we wonder how many drivers' licenses have been revoked throughout the United States for drunken driving, as called for in the Uniform Drivers' License Law! However, the drunken driver soon eliminates himself by trying to get his car up a telephone pole or by landing upside-down on the side of the road.

The dangerous fellow (or woman, in these days) is the driver who has visited the saloon, or "Red's" place by the side of the road, or the night club, or a cocktail party or has tapped his private stock. How many millions of drivers in the U. S. A. do these things?

Ask Dr. H. A. Heise of Milwaukee about these matters. And, incidentally, why have not the reports of Dr. Heise received general and serious consideration?

Whoever invented the slogan "If you drink, don't drive; if you drive, don't drink" did not realize that if the slogan were to be generally observed it would destroy either the alcohol industry or the automobile industry; for if every one who **drinks** would not drive, then there would be such a puny demand for automobiles that great industry would go on the rocks; and if all who **drive** wouldn't drink, then the alcohol business would be ruined.

Our opinion is, we will continue to **drive** and **drink,** and pay for the combined privilege with the lives of at least 20,000 men, women, and children each year.

(The following beautiful article about the surrender of Gen. Lee was written many years ago by Dr. Minor of Macon).

The Surrender

Dr. H. A. Minor, Surgeon of Mahone's Division, gives the following account of General Lee's surrender at Appomattox:

"I was surgeon of the 9th regiment, Alabama volunteers, Forney's (Wilcox old) brigade. Mahone's (R. H. Anderson's old) division, consisted of five brigades, one each from Virginia, Georgia, Florida, Alabama and Mississippi, A. P. Hill's corps, army of northern Virginia.

"Early in the morning of the 9th of April, 1865, we were halted in an old field about a mile from Appomattox courthouse, faced to the right, marched in line about 100 yards, halted, stood at ease. Soon afterwards Fields' division came up, were halted, faced to the left, marched 100 yards, halted, stood at ease. We had heard much of the 'last ditch.' Here it was.

"These two divisions contained more than half of the organized troops that Gen. Lee then had. This was the 9th day from the evacuation of Petersburg, and during these nine days, we had had three days' ration. All our baggage, wagons, ambulances, surgical instruments, supplies, artillery, etc., had been captured. As we marched, the booming of cannons and the rattle of musketry had accompanied us; behind, on either side, and before us. But we had kept our alignment—half naked, hungry and weary—but stern and steady, the men marched. Up to this time we knew nothing of what was in our front—had not thought of surrender.

"After an hour or two, I saw coming from the courthouse a cavalcade, two officers in front, one wearing the grey, the other the blue; about twenty men behind them; one-half blue, one-half grey. As they came up, I recognized Col. Fairfax of Gen. Longstreet's staff. Stepping into the road, I asked, 'Colonel, what means this?' His answer was, 'Gen. Lee has surrendered to Gen. Grant.' I was shocked beyond expression. The men of our regiment called to me from the line to come to them at once and tell them what had occurred. I hurried to them and told them the news. No word can express the scene that followed; they had not thought of surrender but they stood in line. After a while they were allowed to stack arms, but were ordered to remain near the line. A like scene occurred in Field's division across the road. We camped there until we started home, but were not allowed to wander about. There were no other troops in sight except mounted federal videttes all around us, about a mile away, and they kept in perfect order. A federal battery did begin to fire half-minute guns, but after a few minutes these stopped. Now and then a squad of federals went by us, but always on duty with no stops. As they passed us, they saluted respectfully, and wondered at the small number of our men; no evidence of a disposition to crow over us.

"Altogether, we remained in this 'bull-pen' four days; the federals indulged in no boasts, nor firing of guns, no cheers that we heard. Never in all history was a captured army treated with so much respect. We were half starved; too faint and weary, we were given one day's short rations while there, the federals stating that they themselves had very little food.

"Those reminiscences that I wish to lay stress upon are the manner in which the federals received the surrender of our arms and their expressions of admiration. I will now tell of how our (Mahone's division) surrendered. I suppose all the rest of our troops were treated in the same manner:

"On the 10th inst., we were marched a mile or more, then came in sight of the United States army, which we then saw for the first time at this place. In front of us was a field with two ridges or hills running parallel about one-half of a mile apart. A cross ridge connected them, making three sides of a parallelogram with the end next to us open. On the three sides of this were standing a large federal army; many thousands, all armed and in serried ranks, with arms at shoulder, flags flying, officers in their places. It was a grand sight. No cheering, no orders audible to us. Perfect silence.

"We entered the open end of this parallelogram half-way between the two lines. Oh, the heart-breaking ordeal for us. Every officer alert, arms to 'right,' 'shoulder shift,' flags flying. Oh, the poor fellows, *I cannot keep from shedding tears now, forty-nine years after*. Ragged, dirty, unkempt, many barefooted, many coatless, some hatless, eyes swollen. Oh, so hungry and so weary.

"Yet, as they entered this place, where they were to be disarmed and turned loose moneyless, to find their way back to their homes in the various Southern states, where mothers, wives and children were so poor, so helpless, where houses had been burned and farm animals had died or been carried off, these poor fellows dropped their route step and fell into parade step, threw back their shoulders, raised their drooping heads and looked at the brave array of blue on both sides and in front of them. Oh, how proud of them was I—were all of us—for we all were well nigh alike in clothing and other essentials.

"When Gen. Mahone had progressed so far

that the rear of his division was within the parallelogram, he halted his men and faced them to the left, ordered them to close up, then ordered them to stack arms. The reader must know that on such occasions it is usual to have to 'ground arms,' that is, to lay them down on the ground. But here we had no such humiliation. We stacked arms 'on the color line' then hung our colors on the center stack; then fell back in line. We looked at our guns; then with eyes blinded with tears, we looked for the last time at the colors, the old ragged flags that had been shot off. There we stood!

"What of the federals? Gen. Grant and his men treated us nobly—more nobly than was ever a conquered army treated before or since. The conduct of the federals on this occasion was soothing and comforting beyond anything that words can express. As the head of the column entered this parallelogram every flag in that great federal army came to, and was held at salute. Every officer's sword was drawn and held in salute, and every man who carried a gun brought and held it at salute, so long as we remained there.

"We looked in amazement. The army that we had been fighting so long, that we were now surrendering to, had suddenly overwhelmed us with kindly courtesy and high appreciation of our soldierly qualities. They stood thus until our forces had passed out of the parallelogram. It is almost impossible to estimate the comfort and relief this treatment gave us. It relaxed the tension of our nerves. We went back to camp, if that old field barren of tents, blankets, food, horses or wagons, could properly be called a camp. On the evening of the third day we got our paroles. Next morning, lo! there was no army there. No federals! No confederates!

"On the second day, before we had surrendered our arms, we saw coming toward us, as we were jumping about our camp, two horsemen. Soon we knew that the foremost one was our dear old Gen. Lee, with no escort save one orderly. He was riding the old grey thoroughbred, 'Traveler.' As he came up, we strung ourselves along both sides of the road. He lifted his hat and kept it up in his usual salute; his eyes were swollen; he looked, oh, so aged and sad; he did not speak; we stood with heads bare and streaming eyes; he passed on until out of sight, and we never saw him again. We had received his last order—Order No. 9, thanking us, praising us, loving us, and bidding us go to our homes, rebuild them and make good and loyal citizens of the United States. We had submitted our cause to the arbitration of the sword; the game had been played; we had lost.

"Dear old General! he was the greatest of the great in his prosperity and adversity, and defeat displayed the very highest and noblest characteristics of his Christian manhood.

"The next day we remained in the 'bull-pen' waiting our paroles. About night we, (myself, my brother and a friend), got our paroles and our last order from Gen. Lee, his farewell to his soldiers, No. 9.

"Neither of us had a cent of money nor a horse. My horse had some time ago become disabled, and it was between 800 and 900 miles to my home in Macon, Noxubee County, Mississippi. We were weak from want of food, but had no baggage. We prayed for help and guidance to Him who is able to help, and we started home.

"H. A. Minor, M.D.,

"Ex-Confederate Surgeon, Army of Northern Virginia.

P.S.: "I have been practicing my professon, Macon, Miss., since May, 1859; joined Confederate army April 30, 1861, as private in Co. F, 11th Regiment, Mississippi Volunteers.

H. M. H."

"FIFTIETH ANNIVERSARY"

By Dr. H. M. Branham
Brunswick, Ga.

Fifty years ago—thought I knew
Just all a doctor had to do,
To make the sick feel well and strong
But soon I learned where I was wrong.
With confidence, my skill I tried
But oft times trusting patients died.
Now since I have some older grown
I see how little I have known.
In looking back it's strange to me
How 'twas they gave me a degree.
We were not taught—or heard of then
The sera, x-ray, vitamin.
And no more saw a Sphygmograph
Than a one foot neck giraffe.
We were taught to invade the belly cavity
Was a thing of greatest gravity.
For if you cut the belly wall,
The nearest hearse you'd quickly call.
Long years ago it was phlebotomy

But now it's simply laparotomy.
Now an undetermined belly pain
Brings the surgeon 'round again,
To open up, look, feel around,
To see if lesions can be found.
If none is there, I have no doubt
The mild appendix will come out.
No Wassermann or spirochete
Made the picture all complete.
When patient came with lues fixed
We'd give Hg and Ki mixed,
Feeling safe and very sure
That in six months we'd make a cure.
But now with arsphenamine—
Instead of six, it's two times nine.
Lectures were but an audible fuss
When describing laudable pus,
Of which there is now scarce a mention;
Incisions heal by first intention,
If they do not by some strange freak,
The surgeon's broken his technique.
Another thing we sadly missed—
'Twas the nose—throat specialist.
For now a youngun scarce avoids—
Losing tonsils and adenoids.
I say these things not to deride
But to show the M.D.'s stride.
'Twixt what is now and what was then
In prolonging the lives of men.
Since these new things are known to you
I hope you'll pull all patients through.

MAKE READY FOR SOUTHERN MEDICAL AT OKLAHOMA CITY

Dear Friends:

Last year Mississippi was well represented at the Southern Medical; in fact, leaving out Louisiana and considering the number of doctors, our state, we think, headed the list. At New Orleans we had a wonderful meeting. This year the Southern meets in Oklahoma City, one of the most beautiful and progressive cities of the South. The scientific program is to be unusually good, one that you can ill afford to miss. Medical problems are pushing to the front in our profession. The meeting of the president with the presidents-elect, the secretaries and editors of the Southern states will be interesting and beneficial no doubt. The public session is a fine feature of the meeting. Oklahoma City will furnish wonderful entertainment and the mingling with your fellow doctors will do you a lot of good. Write at once for your reservation if you have not done so. Write Dr. P. M. McNeil, Chairman, Hotel Committee, 9th Floor, Commerce Exchange Bldg., Oklahoma City, Okla. In writing for reservation one should indicate the hotel of his choice, the kind and price of accomodation desired and the day and time of day he expects to arrive at Oklahoma City. The Southern Medical Association meetings opens Tuesday morning, November 15 (sessions beginning at 10:00 o'clock) and closes at noon on Friday, November 18.

Dr. Harvey F. Garrison, Sr.
Councilor for Mississippi.

WOMAN'S AUXILIARY
TO THE
MISSISSIPPI STATE MEDICAL ASS'N

AUXILIARY YEAR BOOKS

In September the Auxiliary to The Mississippi Medical Association will issue the second year book of its sixteen year's existence. The first year book, published last year, proved a real help and inspiration to members over the state. In the book published by this year's officers will be found a most enthusiastic appeal from our president, Mrs. John Howell, of Canton. Her earnest approach presages a year of accomplishment.

All officers of state, Southern, and National Auxiliaries will be found in this year's book as in last, as well as a complete roster of state members. Suggested programs for those branch organizations desiring to use them are given. Material for these short programs can be obtained through the state health office. Dr. Underwood signified his desire to assist the organization in this way when the first year book was compiled. Keeping before the public authentic information concerning the profession is one of the outstanding ways in which the branch organizations can assist the profession.

The social or fellowship phase will remain the most important work of the Auxiliary.

With every good wish for a happy, useful year's work with our splendid president,

MRS. C. C. HIGHTOWER,
First Vice President
Program Chairman

MISSISSIPPI STATE MEDICAL ASSOCIATION and COMPONENT SOCIETIES

The Making of a Surgeon*

ISIDORE COHN, M.D., F.A.C.S.
Professor and Associate Director of the Department of Surgery, Graduate School of Medicine, Louisiana State University Medical Center, Senior Surgeon, Touro Infirmary.

"The heights by great men reached and kept
Were not attained by sudden flight,
But they, while their companions slept,
Were toiling upward in the night."[1]

If we are to appreciate what a surgeon should be, we should first consider what he is called upon to do. Ours is the responsibility to deal with the human body, that which cannot be reconstructed by the hand of man, that which is most dear to the individual's family. Let me remind you of the quotation:

"What is man, that Thou art mindful of him?
And the son of man, that Thou thinkest of him?
And yet, Thou hast made him but little lower
than the angels,
And Thou hast crowned him with glory and
honor,
And Thou hast made him to have dominion over
the works of Thy hands."[2]

It is this "dominion over the works" of the Creator which should consecrate us to the tasks before us,—it should make us realize too the importance of the Prophet Micah's statement. "What is required of thee, O man, but to do justly, love mercy and walk humbly."

The preparation for the career of a surgeon requires that we interpret and practice these precepts. Let me try briefly to interpret this admonition, as I understand it. To do justice to the surgical profession one must be prepared by years of study,—not merely by a prescribed course which leads to one or more degrees. The aspirant should be brought to realize that the horizon of surgery is distant and on the plane which leads towards the horizon, we must try to understand as many of the sciences as we can,—since the mechanism of the body is so complex. Mechanics, physics, electricity, to say nothing of the intangible philosophy called human psychology, are only a few of the component factors of which we must have some knowledge. The surgeon must deal with all of these. The student days of the surgeon do not end with a diploma—they should conclude with the grave and then the works of the good surgeon serve through the memory of his disciples as a stimulus so that the past lives in the future,—an immortality truly to be sought.

Justice to the cause by preparation is the first step,—this is logically followed by mercy.

We have been taught that justice should be tempered with mercy. The bold operator, indifferent to the welfare of his patients, one who is only interested in the application of technical details is not really a surgeon.

The surgeon is admonished to act under the only invariable rule in surgery,—the golden rule. If in the daily life of the surgeon he forgets to heal or prevent wounds of mind as well as body, if he fails to approach the family sympathetically, his ministrations are only in part true to the traditions and to the obligations of his calling. His work is really that of the high priest to the body and soul of man.

All in all, he is the servant of but one Master and therefore, he is under constant obligation to remember how little man has gleaned from the great book of nature, — hence humility in his approach to the sacred trust should mark his every activity,—should act as a constant stimulus to learn more, and to apply what he can learn in the short span of life for the service of his fellows.

It is my conviction that the surgeon of today should be thoroughly armed with a knowledge of anatomy that he might attack the newer problems directly and with as little insult to tissue as possible. He should be informed about all technical advances, but he should not hasten to sponsor those procedures not seasoned by sufficient experimental or clinical data. Spectacular procedures are often of passing value.

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*Read before the Section on Surgery at the Seventy first Annual Session of the Mississippi State Medical Association, Jackson, May 21, 1938.

Pool, Eugene: Annals Surgery, vol. 104, 1936.

[2] Psalm 8.

The surgeon of today, as of yesterday, should above all be honest and conscientious in his advice with reference to procedures to be adopted.

The surgeon must not forget that the primary indication for surgery is that the technical procedure advocated should be less dangerous than the disease from which the patient is suffering.

The widening field of surgery requires that its followers should be qualified to deal with human life placed in their hands with due reverence for the undertaking before them[3].

We who are on the "firing line," the active workers in surgery have a great heritage. We cannot help but be reminded of Longfellow's "Psalm of Life."

Lives of great men all remind us,
We can make our lives sublime,
And departing, leave behind us
Footprints on the sands of time.

Footprints, that perhaps another,
Sailing o'er life's solemn main,
A forlorn and shipwrecked brother,
Seeing, shall take heart again.

Let us, then, be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait.

When we seek to solve for our generation the question of making of the surgeon for the next generation, we must cast a backward glance or I should say, we should delve into the story of the lives of the great men whose idealisms form the foundation which prompts us to attempt to lead others.

All that is possible is to bring before you briefly a few inspiring aphorisms of some of the great leaders of the past. It is only natural that Hippocrates should be the first, and from the Oath which all are supposed to have taken, we abstract the following:

> "Into whatever houses I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption."

In the "Law" of Hippocrates, we find the following inspiring ideals:

> "Whoever is to acquire a competent knowledge of medicine, ought to be possessed of the following advantages, a natural disposition, instruction, a favorable position for study, early tuition, love of labor; leisure. He must also bring to the task a love of labor and perserverance, so that the instruction taking root may bring forth proper and abundant fruit.
>
> Timidity betrays a want of power and audacity a want of skill."

We see then that the father of medicine sought to have honesty, persistent study to acquire useful knowledge, and the avoidance of corrupt practice (fee splitting and charlatanism and spectacular unwarranted surgery) as useful lessons come down to us untarnished through the ages.

Next we turn to de Chauliac for guidance. He says:—

> The conditions necessary for the surgeon are four: first, he should be learned; second, he should be expert; third, he must be ingenious, and fourth, he should be able to adapt himself. Let the surgeon be bold in all sure things, and fearful in dangerous things, let him avoid all faulty treatments and practices.
>
> He ought to be gracious to the sick, considerate to his associates, cautious in his prognostications. Let him be modest, dignified, gentle, pitiful, and merciful; not covetous nor an extortionist of money; but rather let his reward be according to his work, to the means of the patient, to the quality of the issue, and to his own worth[4].

Maimonides, 1135 A. D. —1204, left the following inspiring message to the world:

"And now I turn unto my calling;
Oh, stand by me, my God,
In this truly important task!
Grant me success! For—
Without Thy loving counsel and support,
Man can avail but naught.

Inspire me with true love for this my art
And for Thy creatures,
Oh, grant—

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[3] The Present Trend in Surgery, Isidore Cohn, American Journal of Surgery, vol. xxiv, No. 1, page 4.

[4] What the Surgeon Ought to Be According to Guy de Chauliac, de Chauliac's Book on Wounds and Fractures by W. A. Brenner, published by Translator, Chicago, 1923.

That neither greed for gain, nor thirst for
fame, nor vain ambition,
Interefere with my activity.
For these, I know, are enemies of Truth and
Love of men,
And might beguile one in profession
From furthering the welfare of Thy creatures.

Oh, strengthen me!
Grant energy unto both body and the soul,
That I may e'er unhindered ready be,
To mitigate the woes,
Sustain and help,
The rich and poor, the good and bad, the
enemy and friend,
Oh, let me e'er behold in the afflicted and the
suffering
Only the human being!

Faith, an unquenchable desire for knowledge, devotion to duty, and service to humanity are the principles which this master of long ago left as a heritage for all generations of men aspiring to the dignity of our profession.

In a preliminary discourse on the education of the surgeon, Charles Bell in 1826, said:—

> I am now entering, gentlemen, upon a course of surgery, which will be of little service to you unless I lead you onwards.
>
> At present, it is more natural, I believe, to offer you some rules, not for the practice of your profession, but for the study of it: for if you study with real diligence, according to a sensible plan, those good dispositions will naturally grow up, which every friend, which every teacher would wish you to cherish; you will feel a generous disregard of everything but opportunities of doing good, and promoting, to the utmost of your power, the interests of humanity, of your profession, and of general science.
>
> Above all, improve yourselves in anatomy. Anatomy has always been acknowleged as the basis of all medical education.
>
> Gentlemen, there can be no mistake. It is to those only who are skilled in anatomy that we ourselves would trust our health in case of disease, or our persons in any great operation.
>
> It is this knowledge of anatomy that has made the great surgeons of this and other countries respected in their own days, and remembered in ours.
>
> Whoever has thus neglected to study the history of our profession has a narrow mind.
>
> All that is essential to the character of a good surgeon may be acquired. To think otherwise were as discouraging as untrue. The eye is in the mind. A learned eye is a discerning and a quick one. And his hand will not easily tremble who knows perfectly what the hand should do—what the hand may do. Be assured that dexterity and boldness follow judgment and skill as closely as the shadow does the substance. He will be disappointed who waits for a sort of inspiration, and expects to find in himself, naturally and without practice, a quick resolution, a judicious eye, or a dexterous hand. He may believe himself dexterous without knowledge, but it will be mere whiffling agility, and charlatan trick, in place of masterly and deliberate boldness.
>
> But boldness is a seducing word, and the passion of acquiring character in operations is surely full of danger; it is fit for those only to profess who have no higher claim to the public esteem. For as to his patient, this shameless thirst of fame, this unprincipled ambition, is full of danger. He should not torture his patient and protract his pain with foolish and conceited tricks. Nor should he, in any doubtful case endanger his patient, merely to gratify the fools who estimate his dexterity by no other criterion than the stop-watch.
>
> When a man enters upon such duties as these, he should be diligent, watchful, and laborious; humane, friendly, and self-denying; full of unceasing anxiety for others, and a noble disregard of himself. We will not define the chief qualities of a surgeon in this cold-hearted way of personal and showy accomplishments; mercy and tenderness towards his patients, and every kind of charity, are the chief virtues and most becoming ornaments of a surgeon[5].

And now we come to one of the masters of our own time, Rudolph Matas.

In his appreciation of Halstead he said:—

> "The surgeon needs the broad vision and a cultivated imagination. The master surgeon must be a man of mind, a man of thought, a man who knows his province,

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[5] A Short Preliminary Discourse on the Education of a Surgeon, Bell, Charles from Bell's Surgery, vol. 1, 1926.

the human body, as a whole and not only one of its parts."

Matas reminds us that the master surgeons have transferred the undying fire of progress from one generation to another—and they admonish us "We shall not sleep if you break faith with us who die."—

Our master surgeon has by precept and example taught that,

> Knowledge of literature — anatomic training — courage to set aside tradition for scientific principles,—surgical judgment, born of experience, sympathetic understanding of the sick — devotion to duty and above all, intellectual integrity are essential to the making of a surgeon.

We must realize that the surgeon should be the personification of Emerson's epigram:

> "Character is above intellect."

Without character, the intellectual operator becomes one of the most dangerous members of society.

His plausibility and technical skill enable him to deal in human flesh as a prostitute of the noblest calling of man.

> "No ocean of soap and water will cleanse those hands, no power of corrosive sublimate will disinfect their souls."

This is the sentiment of the late Abraham Jacobi, speaking in condemnation of unwarranted surgical procedures.

The making of a surgeon is dependent on the **student**, the **teacher**, and the **teaching facilities.**

The surgeon of today is the result of the fusion of service, ideals and progress into a harmonious whole.

The student must render service, he must have ideals, the inspiration of leaders, and knowledge of the past and present that he may reach up higher in the service of his fellows.

The making of a surgeon is dependent on the **teacher.** The teacher should be a man whose ideals are above reproach, one whose ways are simple and direct and whose motives are not tinged by selfish thoughts of personal aggrandizement, one who is not led to do things which are purely spectacular but whose work is performed with a singleness of purpose intended to lead the younger aspirant to do things which are helpful to the sufferer and not done for the purpose of filling his purse or for newspaper celebration. Purity of motive must actuate the teacher so that the pupil may have an ideal to follow.

Sir William Osler said:—

> "The fate of an institution lies in the men who work in its halls, and in the ideals which they cherish and teach.
>
> "To paraphrase the words of Matthew Arnold, the function of the teacher is to teach and to propagate the best that is known and taught in the world.
>
> "Enthusiasm, a full personal knowledge of the branch taught, a sense of obligation should characterize the teacher.
>
> "To teach to their students habits of reliance, and to be to them examples of gentleness, forbearance and courtesy in dealing with their suffering brethren.
>
> "A due humility should take the place of honour on the list. For its own sake, since with it comes not only a reverence for truth, but also a proper estimation of the difficulties encountered in our search for it[6]."

Institutions in which men are trained are intended primarily to treat the sick, and to provide through observation, assisting and training, means of developing the next generation.

These institutions should not be used only to create opportunities for the young aspirant to operate without proper preparation and reason.

It should be maintained and appreciated that surgical judgment is not a matter of intuition. This can only come through observation, training under supervision and careful study both in the library and the anatomic laboratory.

Teaching in an institution can only be done if there is a responsible chief of each service whose duty it is to see that proper training of the resident staff is done and that all facilities are utilized for the benefit of patients. Expediency is often made the excuse for the division of service. The responsibility under these conditions is not and cannot be assumed by any one for a continuity of purpose. What more gratuitous service can be rendered by an institution than for it to realize that it is training for better service, young men who are looking to it for their training. Under the aegis of College of Surgeons and the qualifying specialty Boards, certain definite standards for graduate instruction are being set up. **These boards will not recognize as suitable institutions for graduate training, institutions which do not meet their requirements.**

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[6] Aequanimitas with Other Addresses, Sir William Osler, (P. Blakiston's Son and Co., 1923).

We plainly see the need for supervised training.

We are bound to realize that the ambitious young men anxious to qualify in their specialty are naturally going to flock, not gravitate to those institutions which can offer them a hope for future recognition.

Those not fortunate enough to obtain training in accepted institutions will gravitate like dregs in a barrel to the institutions which are not performing a service which is of the highest type. The time will come when an institution will be judged by the caliber of the resident staff. What more forward looking step can any institution make than one which will make it one of the pathfinders in the progressive movement which is under way to give graduate training to the men of the coming generation?

Institutions cannot thrive on the quicksand of expediency. They should build on the firm foundations of ideals,—service,—and education.

What greater glory can be enjoyed than the ability to point to the trained men who leave its portals and to the service to humanity which is thus rendered? Institutions will find that their popularity or their usefulness as centers will diminish in proportion as they cease to be teaching centers.

The diploma from a medical school is but a license to appear before a board of medical examiners which gives to the successful candidate the right to continue his medical studies preparatory to a career.

This preparatory period is of necessity long, if the candidate is to qualify as a surgeon.

Surgery has passed through several developmental phases.

In the preanesthetic period two essential prerequisites had to be possessed by the surgeon,—anatomic knowledge and speed. Then came anesthesia. Anesthesia the great boon to suffering humanity was soon followed by Pasteur's discoveries and their application to surgery. With the increased safety, surgical procedures multiplied rapidly. New avenues of approach are constantly being added to the problems through increasing knowledge of biochemical processes.

We may say that through a combined knowledge of anatomy—anesthesia—bacteriology and physiology, we now approach our surgical problems.

The tendency today may be summarized by saying that there is a greater co-operation of effort and co-ordination of knowledge than in former periods.

The difficulties of making a surgeon out of the mass of the profession with the increasing knowledge has been responsible for the development of first, the American College of Surgeons and more recently, the American Board of Surgery. The primary object of each is the same.

What are the requirements and criteria established by these major institutions?

Recently, the Associate Director of the American College of Surgeons, Dr. Malcolm T. MacEachern stated:

> The primary object of the American College of Surgeons since it was founded has been the elevation of the practice of surgery. Graduate training for surgery requires a carefully directed and supervised apprenticeship in which the graduate actually participates in practical surgical work. Graduate training for surgery should embrace as an essential background, continued study of the basic medical sciences—anatomy, physiology, and pathology. Three avenues of approach to graduate training for surgery and the surgical specialties are now available and through these the American College of Surgeons may be helpful:
>
> 1. Graduate training for surgery in universities.
> 2. Fellowships in outstanding clinics.
> 3. Two to five-year surgical residences in selected hospitals.

The hospital desirous of participating in an organized program for graduate training must meet certain requirements.

1. A well-organized medical staff with department chiefs or heads responsible for the organization and operation of the graduate training program. Staff organization must be very definite, and specific responsibilities must be assumed by designated individuals. Those responsible for graduate training for surgery must be chosen solely on the basis of ability, aptitude, and interest. Too often expediency is the major consideration in filling important and responsible positions on the hospital staff. Adequate organization of the medical staff

presupposes the careful selection of the chief of staff and the various heads of departments. They must be of high scholastic standing and must possess the attributes of a teacher.

2. An adequate average patient census of the types of patients required and used for teaching purposes.

3. Complete laboratory and x-ray facilities under an approved type of supervision.

4. Departmental conferences in surgery and the surgical specialties.

5. Weekly clinical and pathological conferences.

6. An out-patient department with systematic follow-up clinic in which the resident, under proper supervision, may spend definite time. The teaching value of out-patient work is largely dependent upon the amount of interest displayed by heads of departments and members of the attending staff .

7. A medical library containing a wide range of textbooks and journals.

8. Affiliation, if possible, with other educational institutions for the purpose of providing the resident staff with opportunity for collateral basic study and study on the cadaver or animal.

9. Assigned personnel, responsible for active and personal supervision and direction of the residents.

10. Reports of actual work performed by the residents. These reports should include additional educational activities offered by the hospital and participated in by the residents.

Certain criteria and requirements are expected of the residents. Character, an internship of one year or more in an approved hospital, a period at least two years or more in graduate training for general surgery.

The members of the resident staff are required to devote adequate time to the study of gross and microscopic pathology, x-ray and basic sciences, to include active surgical service and experience in diagnosis. The residents are required to observe and participate in autopsies, to devote time to the reading of scientific literature under the direction of the preceptor, to have supplemental work in anatomy and animal work, to provide a definite period of time to follow-up work in the out-patient department and last, to be encouraged to do some teaching in the institution.

The American Board of Surgery specifically requires a minimum of four years of hospital or institutional training supplemented by two years of study or practice. Evarts A. Graham states that "one of the difficulties which now confronts the board is the lack of sufficient facilities for the training of any considerable number of surgeons." He says, to be effective, the period of resident training should include graded promotions from an internship; it should be of a sufficient number of years, preferably not less than three years, exclusively devoted to surgery. It should be distinctly educational rather than merely a means of supplying cheaply an assistant to the staff members and it should include in its later period the performance of operations, major as well as minor, both under supervision and entirely independently."

It is apparent that in order to provide the necessary training for the surgeon of the next generation, **more centers for graduate training must be provided. Where possible, universities must develop opportunities and facilities for graduate instruction.** It is possible and all together feasible for a number of institutions to provide the basic science work and to develop a liason with independent hospitals and clinics which are manned by individuals of great clinical experience and qualifications as teachers so that the men who have had their basic science training in the university can obtain their clinical work in such clinics as are accepted by both the American College of Surgeons and the American Board of Surgery. It is our belief that in this way more men can be well trained and the plane of surgery in the independent hospitals and clinics will be on a higher status than at the present time. The training proposed in the universities and associated hospitals should include opportunities and adequate facilities for training under supervision in anatomy, both on the cadaver and surgical technic in the laboratory so that the aspirant for surgical honors will not continue to learn by the trial and error method on the human.

Pathology must be taught in such a manner and under such direction that the surgeon of the next generation will be able to appreciate both gross pathology and microscopic pathology. Operative demonstrations with discussions, diagnostic clinics, ward rounds, interdepartmental conferences are all essential.

An internship in institutions located in cities where the universities are, can be so graded that the second year may be devoted to outpatient clinics, diagnostic studies in the wards, and anatomy and pathology to occupy part of their day.

The third and fourth years of such training can be carried out through the liason with other institutions such as has been mentioned.

Only by a graduate course of a sufficiently long period, can we expect to train the surgeons for the future. When such a plan is realized and becomes effective, the standards of surgical practice are bound to be on a higher level. Then the qualifying boards can demand of institutions for recognition that the members of their staff be qualified by the various boards.

If one finds that aspirants have been inspired by their preceptors and by the knowledge of the motives which have actuated the leaders of the past, we may confidently look forward to surgeons consecrated to the ideals of service to humanity.

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Comments On Transurethral Operations*

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Since the treatment of many urological conditions has changed in the past few years, I felt it would be of interest to report some of the work we and other urologists are performing. Until a few years ago, open operation was necessary for the relief of most vesical calculi, tumors of the bladder, ureteral obstructions, and prostatic obstructions. It is now possible to relieve the majority of these conditions by conservative transurethral methods. By these methods we are able to give the patients relief with less danger, less suffering, and less expense. Many patients who were considered inoperable on account of badly damaged heart and kidneys are now being treated without difficulty.

Vesical Calculi. Although litholapaxy has been practiced for many years, only within the past few years have instruments been devised with which we are able to crush stones under vision. The lithotroptoscope is introduced into the bladder through the urethra and if the stones are not too numerous or not over 1½ inches in diameter, they may be crushed under direct vision and the fragments removed. In patients with an associated prostatic obstruction, litholapaxy and resection of the prostate may frequently be done in one sitting. A recent case, Mrs. D., illustrates the saving in hospital expense. The patient was in an automobile accident, at which time she received a fracture of the pelvis and an extraperitoneal rupture of the bladder. Suprapubic incision and repair of the laceration of bladder was performed. Suprapubic wound healed; however, the patient continued to have considerable pyuria and dysuria. Six months after the accident, cystoscopic examination revealed a calculus about 1¼ inches in diameter lying in the base of bladder. Under pentothal sodium anesthesia, the calculus was crushed and fragments washed out of the bladder. A small piece of bone was found as a nucleus of the calculus. This patient was in the hospital only twenty-four hours.

Vesical Tumors. Pedunculated papillomatous tumors of the bladder which are no more than 2½ to 3 inches in diameter may be removed transurethrally with the McCarthy resectoscope. The infiltrating broad-based carcinomas are best not treated by this method. In this type of tumor, open operation with excision of the tumor is the operation of choice. If this is not possible, radium and deep x-ray therapy frequently give some relief.

Ureteral Obstructions. Many ureteral obstructions, such as stricture of the ureter and stones in ureter, may be relieved by transurethral methods. Thompson[1], Mayo Clinic, reports 180 ureteral calculi removed in this manner. In most of these cases, the first attempt was successful, the calculus being removed at the time of operation either by engagement with an extractor or by enmeshing it with multiple catheters. In six of my last seven patients with ureteral calculi situated in the lower half of ureter, the calculus was passed following the passage of ureteral catheters and the injection of a two per cent aqueous solution of Avertin.

Ureteral dilatation through the operating cystoscope is useful in relieving strictures of the ureter and improving drainage from kidney. Ureteral meatotomy is frequently performed to facilitate passage of a calculus or for the relief of a ureterocele.

Prostatic Obstructions. The symptoms of prostatic obstruction are well known to all of you. However, I see many patients with marked enlargement of the prostate, considerable residual urine, badly infected bladders, and kidneys damaged by back pressure, who have been treated for "kidney trouble," and have never had an examination to determine if they had a prostatic obstruction.

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*Read before the Section on Surgery at the Seventy-first Annual Session of the Mississippi State Medical Association, Jackson, April 20, 1938.

When a patient, especially one past fifty years of age, presents himself to you with symptoms of prostatism, such as urinary frequency, nocturia, or dysuria, at least two simple examinations should be made. First, catheterization to determine the amount of residual urine, which will frequently give you an idea as to the amount of obstruction, and second, rectal palpation of the prostate. Since many patients with comparatively small prostates by rectum have marked intravesical enlargement, a cysto-urethrascopic examination is frequently necessary to determine the amount of obstruction. Do not delay this examination until irreparable damage has been done to kidneys, heart, and bladder.

Most patients with prostatic obstruction are now treated by prostatic resection, which is the removal of the obstructing part of the prostate gland with an instrument passed through the urethra. This, in my opinion, is the greatest advance in urology in many years. According to Dorman [2], the older doctor no longer lives in fear of prostatic obstruction; the young doctor looks forward with anticipation to his old age, and the layman comes to the urologist asking for the new operation.

Resection of the prostate was first advocated for the relief of patients suffering with symptoms of prostatism produced by a small amount of glandular tissue. It is now used in all types of prostatic obstructions. Many surgeons have objected to the procedure on the grounds that the prostate gland was not completely removed and the remaining tissue might undergo malignant change. This objection does not seem to be sound. Dr. J. C. Henthorne, Pathologist of the Baptist Hospital, states that while he was at the Mayo Clinic he performed a number of autopsies on patients who had previously had either suprapubic or perineal prostatectomies and in every case some prostatic glandular tissue remained.

In the treatment of carcinoma of the prostate, Dr. Hugh Young and others advocate radical perineal prostatectomies; however, there are not many surgeons who attempt to perform this operation. Caulk[3] stated that he had never cured a patient with prostatic cancer and believes that most of us are in the same predicament. With transurethral surgery, we are able to relieve the obstruction and give the patient a free urinary stream. In certain cases, radon seeds and deep x-ray therapy may delay metastasis and decrease pain.

Prostatic resection requires thorough knowledge of the pathology of the deep urethra, and should be performed only by those who have had experience and training in this work. I believe this is the most tedious and difficult operation the urologist is called upon to perform. A few years ago, when some of the newer instruments were placed on the market, enthusiastic salesmen induced many physicians to purchase an instrument and electrical unit. Many of these doctors soon discovered, to their dismay, that the operation was hazardous and not a procedure for the occasional operator. Alcock[4] has shown that with increased experience, the mortality rate and morbidity decreased. In my own practice, I have found that with increasing experience I am able to remove a larger amount of tissue in less time, with less hemorrhage, and less danger of postoperative complications.

I believe those of you who have had an opportunity to see a resection properly done were impressed with the speed of the operation, the lack of danger accompanying it, and its astonishing immediate results. The average patient is in the hospital about one week after the operation. He is out of bed on the second or third day and there is little or no postoperative discomfort.

Since 1932, I have treated all patients with prostatic obstruction requiring surgical relief by the transurethral method with the exception of those having enormously enlarged prostates, and those who had some peri-urethral or urethral pathology in which passage of the instrument was difficult or impossible. With increasing experience, I am treating more patients by the transurethral method and performing only an occasional suprapubic prostatectomy. For instance, in the last fifty patients requiring surgical relief, suprapubic prostatectomy was necessary in only four cases. I prefer low spinal anesthesia, however, I have used intravenous pentotnal sodium in a few cases.

The type of current instrument used is a matter of personal choice. I am using the Davis-Bovie electrical unit and the Stern McCarthy resectoscope. Cutting a channel through the prostate is not sufficient. It is necessary to remove the entire prostate down to the prostatic capsule in order to obtain good results. Some of the very large glands may require two resections. Unless the obstruction is completely removed, the patient will have a persistent frequency of urination, dysuria, and pyuria, although he may be able partially to empty his bladder.

Results. Of my last one hundred patients with prostatic obstruction treated by the transurethral method, there have been two deaths. Both of these deaths were due to an acute pyelonephritis. One occurred in a ninety-three year-old Civil War veteran on the third postoperative day. The second occurred in a patient aged seventy-seven on the twentieth postoperative day.

The average age of these one hundred patients was 69.2 years. The average number of days in the hospital after operation was 8.7 days. It was necessary to perform suprapubic cystostomy to control postoperative hemorrhage on four patients. Other complications, such as sepsis and epididymitis have not been severe.

Regarding recurrence of the obstruction, I have had four patients on whom I found it necessary to perform a second resection six months to three years following original resection. That recurrence of the obstruction also follows suprapubic prostatectomies is shown by the fact that it has been necessary, in the last two and one-half years for me to do transurethral resections on five patients who had previously undergone suprapubic prostatectomies.

I believe the results obtained with prostatic resection justify every physician to advise his patients with prostatism to seek relief before kidney function becomes too badly damaged.

SUMMARY

1. Attention is called to the transurethral method of treatment of several urological conditions.

2. The saving in hospital expense is illustrated in a case report of a patient with vesical calculus who required only 24 hours hospitalization.

3. A brief description is given of the transurethral method of treatment of certain bladder tumors and ureteral obstructions.

4. A plea is made to the general practitioner to make a more thorough examination to determine if patient has a prostatic obstruction.

5. A brief summary of the transurethral method of treating prostatic obstruction is given.

6. A summary of the last one hundred patients treated by transurethral method is given. There were two deaths in this series.

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DISCUSSION

DR. PAUL G. GAMBLE (Greenville): With the development of modern urological methods of diagnosis a new chapter has been written in urology.

I want to emphasize what Dr. Ainsworth has said concerning some outstanding developments:

First—Treatment of acute renal infections by means of the ureteral catheter through the cystoscope. These cases were previously treated by surgery—pyelotomy or nephrectomy, if the infection had reached abscess formation.

Second—Stones in the ureter are now treated by ureteral manipulations and by this method the stones are frequently passed or removed by instrumentation.

Third—Strictures of the ureters are gradually dilated.

Fourth—Diagnosis and treatment of benign papillomas of the bladder. Small papillomas may be fulgurated and the patient obtains complete recovery. Also a small piece of tissue can be removed through the cystoscope with forceps for diagnosis and by this means one is enabled to make an early diagnosis with a more favorable prognosis.

Fifth—The treatment of bladder neck obstructions due to hypertrophied prostate gland, cancer of the prostate, and bladder neck constrictions. A sufficient amount of the prostatic gland can be removed so as to afford complete relief to the patient in cases of hypertrophy; in cases of prostatic carcinoma the patient's condition can be made much more comfortable by removing enough obstruction to allow free drainage of urine.

In dealing with these prostatic cases one should not forget that it is very essential to prepare the patient in almost the same way in which we did for prostatectomy. The preparatory treatment consists of drainage of the bladder through an indwelling catheter or a suprapubic cystotomy, and frequent catheterization.

There are two groups of cases to be considered here:

First—those patients with good kidney function, favorable cardiovascular condition, little or no infection and a small amount of residual urine. These will need little or no drainage as an indwelling catheter has a tendency to produce more or less of an urethritis and causes slight infection where none previously existed.

Second—This group are those whose general condition is weakened, who have poor kidney function, impaired cardio-vascular system, marked retention of urine and poor blood chemistry; also severe infections of the bladder and kidneys. These patients will need considerably longer preparation than the first group, in which there is only slight infection and the other conditions named above are normal.

In some of the extremely poor risks it is advisable to do a suprapubic cystotomy and sometimes wait for weeks or months before doing a resection.

Postoperative treatment consists of keeping the bladder free of blood clots so that drainage will not be interfered with. If the catheter or urethra becomes obstructed by even a small clot the bladder fills and is contracted in an attempt to expel it, a spasm of the bladder will develop and the bleeding which is very slight will increase and become profuse. Some of these patients may need postoperative supportive treatment such as glucose intravenously, etc.

Complications:—First is hemorrhage primary and secondary. If all bleeding points are thoroughly controlled while the patient is still on the operating table the danger of primary hemorrhage will be very slight, but often when the blood pressure becomes normal you may have a slight hemorrhage.

Secondary hemorrhages may occur a few days to a week or more postoperatively. These late hemorrhages are usually due to sloughing or infection. Most of them can be controlled by re-introducing the resectoscope and coagulating the bleeding points. If the hemorrhage has been severe and the bladder is filled with clot it may be necessary to do a suprapubic cystotomy to control the hemorrhage.

Second—Epididymitis. This condition may occur during the preparatory stage or after the resection; it can be avoided by ligation of the vas when the preparatory treatment is begun.

Third—Pyelitis and pyelonephrosis may occur from an ascending infection.

Fourth—Peri-urethral and peri-prostatic abscesses may develop.

Fifth—Cases of pneumonia and phlebitis have been known to develop. There are some accidents that may happen in this operation—such as incontinence of urine due to injury to the external sphincter muscles. This condition can be avoided if during the resection the operator does not come beyond the verumontanum. The bladder may accidently be cut thereby allowing the possibility of extravasation of urine to develop. Strictures of the urethra have been reported due to traumatism of the mucous membrane.

The question is often asked as to how much tissue is necessary to be removed. I would say as much of the gland as possible, going even down to the capsule.

DR. A. M. McCARTHY (Electric Mills): There is really little left to be said in the discussion of Dr. Ainsworth's very timely and ably presented paper, except to reiterate and re-emphasize one or two of the pertinent points with which I am acquainted.

I certainly agree with his opening statement that the treatment of many urological conditions has changed during the last few years by the development and refinement of transurethral operation.

He has presented evidence that transurethral prostatic resection is a good and safe operation when performed by skilful and experienced hands, that bad results are usually due to incompetent performance and that long and earnest striving for adequate urethral cystoscopic proficiency should be required of every surgeon before he attempts his first resection.

Because of the lack of adequate training and skill on the part of many who first attempted to relieve prostatic obstructions by this procedure, many evil results were reported and it is unfortunate that this operation is considered by a great many physicians as still on trial, because of the question of its safety. The figures presented by Dr. Ainsworth coincide with thousands of other reported cases by other capable urologists, and ought to convince even the skeptical that this operation when properly performed has greatly reduced both the mortality and morbidity of prostatic surgery.

It is surprising to me how often the symptoms of prostatism are not recognized and complete urethral obstructions allowed to develop under the guise of cystitis, pyelitis, nephritis, etc. Dr. Ainsworth tells us that he now resects all but the enormously enlarged prostates by the transurethral method. This is very encouraging because in this day and time we should become alert enough in diagnostic acumen and progressive enough in our efforts to educate the public so that the huge hypertrophies of the prostates should go the same way as did the huge ovarian cysts that used to adorn the shelves of our pathological museums.

It is my sincere hope that this subject will continue to be stressed before gatherings of this type until a greater interest is taken in the early diagnosis and there is surgical intervention in prostatic hypertrophy as soon as obstructive symptoms appear, at a time when good end results are almost one hundred per cent assured with a minimum of hospitalization and expense.

DR. TEMPLE AINSWORTH: (Closing): I wish to thank Drs. Gamble and McCarthy for their discussion. I think the points which they brought out are timely. I am glad that Dr. Gamble discussed the pre- and postoperative treatment as I did not go into this at all due to lack of time.

You will notice that I reported my last 100 cases. When I first began doing transurethral resections of the prostate, I had a great deal of difficulty in controlling hemorrhage and patients frequently had a rather stormy postoperative course. This is a difficult procedure to perform and I believe that most operators will have plenty of grief when they first start doing this type of work. If I had reported my first 100 cases or my first 25, the results would have been nearly as good as the results given.

Thank you for your kind attention.

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MISSISSIPPI STATE MEDICAL ASSOCIATION

Organized 1867

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The editors are not responsible for statements made by any contributor.

Manuscripts and all material for publication should be addressed to the editor, P. O. Drawer 231, Vicksburg, Mississippi.

EDITORIALS

SUCCESS OF SOCIETY MEETINGS

What has regular attendance at medical society meetings to do with successful medical societies? It can well be said that no meeting of a society is a complete success with even one member absent, because every meeting is characterized—or should be—by good fellowship and the development of closer and more practical friendships. An absentee is depriving those present of this opportunity for fellowship—he is, by the same token, missing one of the opportunities which is rightfully his as a member of the society. It is through regular attendance and the intensified development of friendship that a successful society is possible.

Neglect has lost more business than competition ever will.—Jennings.

COPIED

"Is she making him a good wife?"

"I don't know about that, but she is sure making him a good husband."

The patent medicine company was offering one dollar cash for testimonials and received the following in the mail: "For nine years I was totally deaf, and after using your salve for only ten days I heard from my brother in Nebraska."

Mrs. Newed: "There you are, dear, my first Thanksgiving turkey."

Mr. Newed: "Wonderful, darling, how beautifully you have stuffed it."

Mrs. Newed: "Stuffed, but, my dear, this turkey was not hollow."

STATE HOSPITAL COMMISSION

On July 1, began the second biennium for which the State appropriated funds for the care of indigent patients in approved hospitals throughout the state under the direction of the State Hospital Commission. During the first biennium beginning July 1, 1936, some fifty hospitals were approved and cared for charity patients. The lives that were saved and the suffering alleviated cannot be counted. Recent inspections of approved hospitals have shown that little or no distinction is made between pay and indigent patients. The standards of hospitals are being constantly improved. Only thanks can go to those doctors who have cared for state-aid patients without fee and to the hospitals who have co-operated by caring for patients at recompense less than the average per diem cost for Mississippi hospitals.

The first biennium was a period of organization. Beginning in a pioneer work with no precedents to follow, the State Hospital Commission, also serving without pay, has worked out a plan for the care of indigent patients that has drawn the attention of other states and that promises in the present new biennium to work smoothly and efficiently and at a cost that is reasonable. With the continued co-operation of the doctors and hospitals of Mississippi, it is believed that this state will have the best plan for the care of indigent sick now known.

The allotments for each county are slightly greater for this biennium than in the last and for the information of those concerned, these are given below. It is to be hoped that all members of the Mississippi State Medical Association will note the amounts available, will refer for hospital care those really indigent and in need of such care and refuse certificates to those not deserving to the end that no citizen of Mississippi in real need shall suffer or die unattended.

* * * *

STATE HOSPITAL COMMISSION COUNTIES OF MISSISSIPPI

County	Population Census of 1930	Funds Available for Biennium for Charity Hospitalization	Monthly Allotments
Alcorn	23,653	$6,543.89	$272.66(2)
Amite	19,712	5,453.46	227.23(1)
Attala	26.035	7,202.90	300.12(0)
Benton	9,813	2,714.88	113.12(0)
Bolivar	71,051	19,657.11	819.04(6)
Calhoun	18,080	5,002.05	208.41(8)
Carroll	19,765	5,468.22	227.84(2)
Chickasaw	20,835	5,764.25	240.17(7)
Choctaw	12,339	3,413.73	142.23(8)

Claiborne	12,152	3,361.99	140.08(3)
Clarke	19,679	5,444.43	226.85(1)
Clay	17,931	4,960.82	206.70(0)
Coahoma	46,327	12,816.92	534.03(8)
Copiah	31,614	8,746.39	364.43(2)
Covington	15,028	4,157.67	173,23(6)
DeSoto	25,438	7.037.73	293.23([illegible])
Forrest	30,115	8,331.67	347.15(2)
Franklin	12,268	3,394.09	141.42(0)
George	7,523	2,081.33	86.72(2)
Greene	10,644	2,944.79	122.69(9)
Grenada	16,802	4,568.47	193.68(6)
Hancock	11,415	3,158.10	131.58(7)
Harrison	44,143	12,212.69	508.86(2)
Holmes	38,534	10,660.89	444.20(3)
Humphreys	4,729	6,841.57	285.06(5)
Issaquena	5,734	1,586.38	66.09(9)
Itawamba	19,225	5,042.16	210.09(0)
Jackson	15,973	4,419.12	184.13(0)
Jasper	18,634	5,155.32	214.80(5)
Jefferson	14,291	3,953.78	164.74(0)
Jefferson Davis	14,281	3.951.01	164.62(5)
Kemper	21,881	6,053.64	252.23(4)
Lafayette	19,978	5,527.15	230.29(7)
Lamar	12.848	3,554.55	148.10(6)
Lawrence	12,471	3,450.25	143.76(0)
Leake	21,803	6,032.06	251.33(5)
Lee	35,313	9,769.77	407.07(3)
Leflore	53,506	14,803.08	616.79(5)
Lincoln	26,357	7,291.98	303.83(3)
Lowndes	29,987	8,296.26	345.67(7)
Madison	35,796	9,903.39	412.64(1)
Marion	19,923	5,511.94	229.66(6)
Marshall	24,869	6,880.31	286.67(9)
Monroe	36,141	9,998.84	416.61(8)
Montgomery	15,009	4,152.42	173.01(7)
Neshoba	26,691	7,384.39	307.68(2)
Newton	22,910	6,338.33	264.09(7)
Noxubee	25,560	7,071.48	294.64(5)
Oktibbeha	19,119	5,289.50	220.39(5)
Panola	28,648	7,925.81	330.24(2)
Pearl River	19,405	5,368.62	223.69(2)
Perry	8.197	2,267.80	94.49(2)
Pike	32,201	8,908.79	371.19(9)
Pontotoc	22,034	6,095.97	253.99(8)
Prentiss	19,265	5,329.89	222.07(8)
Quitman	25,304	7,000.66	291.69(4)
Rankin	20,353	5,630.90	234.62(0)
Scott	20,914	5,786.11	241.08(8)
Sharkey	13,877	3,839.24	159.96(8)
Simpson	20,897	5,781.41	240.89(2)
Smith	18,405	5,091.96	212.16(5)
Stone	5,704	1,578.08	65,75(3)
Sunflower	66,364	18,360.40	765.01(6)
Tallahatchie	35,568	9,840.31	410.01(3)
Tate	17,671	4,888.89	203.70(4)
Tippah	18,658	5,161.96	215.08(1)
Tishomingo	16,411	4,540.30	189.17(9)
Tunica	21,233	5,874.36	244.76(5)
Union	21,268	5,884.05	245.16(8)
Walthall	13,871	3,837.58	159.89(9)
Washington	54,310	15,425.51	626.06(3)
Wayne	15,295	4,231.55	176.31(4)
Webster	12,128	3,355.36	139.80(6)
Wilkinson	13,957	3,861.37	160.89(0)
Winston	21,239	5,876.02	244.83(4)
Yalobusha	17,750	4,910.75	204.61(4)
Yazoo	37,262	10,308.98	429.54(0)
	1,771,114		

FOLLOW-UP REPLIES

Question: "Do you consider yourself cured of the trouble which brought you to the hospital?"

Answer: "Yes."

Remarks: "It did me so much good that I have a shape like Mae West now."

Do you consider yourself cured of the trouble that brought you to the hospital? "Yes."

If not cured, do you consider yourself improved? "Very little."

Do you suffer from any of the same symptoms as when here? "No more than heart."

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION: Seventy-Second Annual Session and Thirty-Sixth Annual Session of the House of Delegates, Gulfport, May 9, 10, 11, 1939.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday, each month, Natchez, 7:30 p. m.

Amite County Medical Society: W. S. Stewart, Oskya, president; D. H. Thornhill, Crosby, secretary. Meets second Thursday, each month with Wilkinson County Medical Society, Field Memorial Hospital, Centreville.

Central Medical Society: J. T. Rainer, Yazoo City, president; Lawrence W. Long, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. D. House, Sledge, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: William P. Warfield, Clarksdale, president; N. C. Knight Clarksdale, secretary. Meets second Wednesday each month, Alcazar Hotel, Clarksdale, 12 noon.

Coast Counties Medical Society: W. W. Lake, Pass Christian, president; D. L. Hollis, Biloxi, secretary. Meets first Wednesday, each month at night.

Delta Medical Society: C. W. Patterson, Rosedale, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

Desoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4, Memphis, secretary. Meets first Monday of January, April, June, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Harrison, Philadelphia, president; Bob A. Cameron, Meridian, secretary.

Franklin County Medical Society: C. A. Everett, Bude, president; L. Costley, Meadville, secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: B. B. Martin, Jr., Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Mississippi State Charity Hospital, Vicksburg, 7 p. m.

Marshall County Medical Society: C. R. Senter, Byhalia, president, Herbert Phillips, Holly Springs, secretary. Meets second Thursday each month, alternating between Byhalia and Holly Springs.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary.

North Mississippi Medical Society: R. M. Adams, Ripley, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen Counties Medical Society: Dr. R. J. Brown, Iuka, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September, December.

Pike County Medical Society: E. M. Givens, McComb, president; T. Paul Haney, Jr., McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Sunflower County Medical Society: U. S. Wasson, Moorhead, president; H. B. Cottrell, Indianola, secretary.

Tallahatchie County Medical Society: G. tower, Webb, vice president; J. E. Powell, Charleston, secretary.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: R. B. Zeller, Hazlehurst, president; J. C. McGuire, Hazlehurst, secretary. Meets June 14, Walthal Hotel, Tylertown; September 13, Riverside Hotel, Monticello; December 13, Whitworth College, Brookhaven, 12:30 p. m.

Webster County Medical Society: E. F. Arnold, Bellefontaine, president H. K. Curry, Eupora, secretary.

Wilkinson County Medical Society: C. E. Catchings, Woodville, president; E. M. Butler, Centreville, secretary. Meets second Thursday, each month, with Amite County Medical Society, Centreville.

Winona District Medical Society: T. J. Brown, Grenada, president; S. B. Caruthers, Grenada, secretary.

INTERPRETING MEDICAL LITERATURE
CLINICAL PATHOLOGY AND PATHOLOGY

E. T. White, Greenville

The Takata-Ara Reaction—Chasnoff and Solomon, J. Lab. & Clin. Med. (June) 1938.—The Takata-Ara reaction has been proposed by some as a specific test for cirrhosis of the liver and as an acid in differential diagnosis between cirrhosis and carcinoma of the liver, but these authors have found in their work that the test is not a reliable test for cirrhosis, especially in early cases as it is often negative at this stage and when it becomes positive the clinical evidence of cirrhosis of the liver is so manifest until no test is needed to confirm the diagnosis. They also found that carcinoma of the liver gives a positive reaction in a high percentage of cases, thus making the test not a satisfactory means of differentiating between cirrhosis of the liver and carcinoma involving the liver. They also concluded from their work that the test is occasionally positive in cases in which there is clinically no evidence of liver disease. Their final conclusion is that the Takata-Ara reaction cannot be regarded as a specific test for cirrhosis of the liver, but a negative reaction in any suspected case would tend to cast doubt on the diagnosis.

Immunologic Reactions for Undulant Fever. —Gersh-Mugrage, J. Lab. & Clin. Med. (June)

1938.—Their study consisted of 5000 blood serums submitted for the Wassermann by the hospital and 491 skin tests.

The blood serums examined showed an agglutination in 60 or 1.2% of this group; 79 per cent gave a history of drinking raw milk for past two years, 21 per cent drank little or no raw milk.

The group in which the intradermal test was made gave a positive reaction in 12.2 per cent.

The conclusions were that there seems to be direct relationship between the occurrence of positive immunologic reactions and the ingestion of raw milk.

Undulant fever is relatively common, and it should be ruled out in any obscure case in which there is any doubt as to the diagnosis.

Active Immunization Against Tetanus by Means of Tetanus Toxoid.—Herman Gold, J. Lab. & Clin. Med., 1938.—The minimum titer of tetanus antitoxin that will protect an individual against tetanus is probably between 0.1 to 0.2 unit per c. c. of serum.

To produce the most antibodies the use of 1 c.c. doses of the toxoid is more effective than smaller doses of the antigen. Two doses given close together (month or less) do not stimulate a high antibody response, but the interval should be at least 90 days or longer. The first dose seems to prepare the host so that after a suitable interval of time—90 days or more—the administration of the second dose is followed by a rather prompt appearance in the blood of an increased amount of tetanus antitoxin. The antibodies gradually decrease in the serum and after a year or more get below the protective level, but a third injection will raise the titer again. The time required for antibody response is from two to seven days after the administration of the toxoid.

At the present time active immunization against tetanus may prove to be of value in military service and certain phases of civil life where injuries occur repeatedly, but he does not advocate it for the general public.

Conclusions: (1) A protective antitoxin titer of 0.1 unit or more per c.c. of serum follows the second injection of toxoid when given 90 days or more after the first injection.

(2) The duration of the protective level of antitoxin varies from three months to over two years.

(3) The antitoxin titer can be raised to a protective level by the injection of a third or subsequent dose of toxoid.

(4) From five to more than seven days is required before the protective titer is reached after the repeat injection of toxoid.

(5) If an injury occurs during the interval of time that elapses before the basic course of immunization is completed and within a few days after the repeat injection it may be necessary to resort to passive immunization in order to insure full protection against tetanus. July 9, 1938.

EYE, EAR, NOSE and THROAT

Alston Callahan, Vicksburg

Benzedrine in Cycloplegia.—Judd Beach and W. R. McAdams, Am. J. Ophthal. (Feb.) 1938, p. 121.—This is the report of more definite data upon the use of benzedrine with cycloplegics in testing refraction. Complaints against the repeated instillations of atropine are great, due to the loss of time and the cumulative effect of the drug.

Drs. Beach and McAdams report very few additional findings since their first report, reviewed in THE MISSISSIPPI DOCTOR in December, 1937, except a slight modification in technique.

They combine instillations of benzedrine with atropine or homatropine, depending on the age of the patient, and report that they secure efficient cycloplegia in an hour to an hour and a half.

Discussion: Since this newer method was suggested in the latter part of 1937, the reviewer has had opportunity to use it in about twenty-five cases. These cases were selected at random, and for the most part were young school children sent in for examination by welfare organizations.

The results were greatly disappointing. The method suggested by Dr. Beach was carefully followed throughout, and while full dilatation was quickly secured, there was no evidence of complete cycloplegia. Especially noticeable in cases refracted also under continued atropine alone was the fact that cylindrical errors were introduced.

It is the reviewer's opinion that benzedrine may be helpful in breaking synechiae, as many other drugs do, but that it is inferior to hyoscine. No method yet has approached the accuracy of the repeated instillations of atropine or homatropine.

Epithelium in the Anterior Chamber of the Eye After Operation and Injury.—C. A. Perera, Ah. J. Ophthal. (June) 1938, p. 605.—Implantation or down-growth of epithelium into the anterior chamber of the human eye following perforating injuries or intraocular operations is a well-known clinical entity. This serious complication often results in the loss of the eye from an intractable secondary glaucoma.

The literature on this type of complication is reviewed thoroughly, and it is pointed out that therapy has in general been unsatisfactory until the application of roentgen radiation.

The author presents one case of an epithelial cyst following an otherwise successful cataract extraction, which responded favorably to this method of therapy. In addition the author performed experimental work on animals, in an attempt to cause epithelization of the anterior chamber. Despite the introduction of a flap of the cornea, after a few weeks the cornea gradually disappeared.

Discussion: There are few complications that are more disturbing in ocular surgery than the formation, several weeks after an otherwise perfect procedure, of an epithelial cyst. The reviewer has, through the courtesy of other surgeons, seen two such cases. Radiation was of benefit in both of these cases, but the visual acuity was reduced considerably. Progress in the solution of the problem is to be highly desired, and Dr. Perea is to be commended for this work.

July 10,1938.

PUBLIC HEALTH

Felix J. Underwood, Jackson

The Acute Diarrheal Disorders.—Am. J. Pub. H. (June) 1938.—Outbreaks of diarrheal disorders are explosive in character, often widely distributed and the ailments are distressing. A satisfactory explanation and effective preventive measures are demanded. Under these circumstances there is but slight consolation in the knowledge that the epidemic diarrheal disorders are commonly of short duration and rarely hazardous to life. We are, and we must be, concerned with these outbreaks, but we must also evaluate accurately the relative importance of the epidemic and endemic diarrheal disorders.

The study is based upon 57 reported deaths from acute diarrheal disorders during July and August, 1937, in Bernalillo County, New Mexico, which has an estimated population of 55,000.

The differential clinical diagnosis of diarrheal disorders presents unusual difficulties. There is but one outstanding symptom—diarrhea—and that may arise from a wide variety of causes. From history, physical findings and other data obtainable it was estimated that well over 90 per cent of the diarrheal disorders observed in this study were acute enteric infections. Further than this it was impossible to go without the evidence presented by laboratory studies. These laboratory studies are difficult for we have to deal with not one organism of relatively constant characteristics, as in typhoid fever, but at least two families of organisms, the Shigella and Salmonella, each with several members varying in type, and with many strains readily tending to reveal varying characteristics in different environments. In various laboratory procedures used it was found that in 200 unknown positive S. dysenteriae specimens, 83 per cent were isolated on desoxycholate citrate agar, 33.7 per cent on plain desoxycholate agar, 30.2 per cent on Endo's agar, and 26.5 per cent on eosin-methylene-blue agar. The relative value of these media for the isolation of the Sonne variety of S. dysenteriae is not reliably indicated in this study.

In epidemiological studies designed to determine the incidence or spread of these infections, it is essential that healthy individuals and those mildly ill be examined with the same interest and care as those severely ill.

The major problem in prevention of the acute diarrheal disorders appears to be the more effective prevention of the dissemination of human excrement.

July 7, 1938.

A Clinical Study of Pulmonary Embolism.—Rebertson, Hugh: Am. J. Surg. 41:3 (July) 1938.—The study is based on analysis of 146 fatal cases. The author concludes that embolism of the pulmonary artery is the result of the formation of a blood clot usually in the femoral or iliac veins. This clot is usually attached to the vein wall. It separates from the wall as it contracts, and then slips along the vein to the vena cava and to the heart where, after being churned about, it is expelled into the pulmonary artery. During the period of formation and slipping, there are few definite symptoms to give warning of the impending disaster.

Of the 146 cases, 82 were men and 64 women. Sex(apparently, had no bearing as a predisposing factor. The average age was 44 years. One patient was eighteen months old, another eighty-nine years. Most had passed their fortieth birthday. A majority were obese. The negro was apparently slightly less susceptible than the white man. The Jew seemed less frequently affected than other groups. It was the author's impression that patients with a stodgy and morose personality made up a more susceptible group.

Early Symptoms.—Preceding pulmonary embolism, that is, during the period during which the clot is forming or traveling along the vein, the patient often feels apprehensive, but cannot tell why. He often has a sense of impending disaster and speaks to his relatives or friends about it. Such complaints are usually not taken seriously by nurses and physicians because of lack of any findings to support their uneasiness. Unexplained moderate fever occurred during the convalescence of twenty-seven patients (18%). Sixty-five per cent of the group had subnormal blood pressure at some time during their convalescence; 5% were definitely hypertensive. Only 8 of 104 patients who were free of infection, showed pain or tenderness prior to the pulmonary attack; 5 of the 8 patients had pain in the femoral region. On closely questioning nurses, it was found that many of the unfortunate individuals had complained of minor attacks, pains, or uneasy feelings of which neither the patient nor the nurse spoke to the attending physicians.

The Attack.—The symptoms depend on the size and site of lodgement of the embolus. If the embolus is massive and completely blocks the pulmonary artery, the patient gasps, becomes pallid, and dies almost instantly. Fifty-seven patients (39%) died in this fashion. If the pulmonary artery is only partially blocked, occasionally, a severe chill accompanied by a sharp chest pain and dyspnoea is the first symptom. The partial block gradually becomes a complete one because of accumulation of newly formed thrombus around the embolus. Such patients may live for several hours or days and, during this time, have a chance of being rescued by the Trendelenburg operation or may occasionally recover with medical treatment. Eighty-nine patients (61%) died in this manner. The massive block with immediate death is the **embolie syncopale** of Rochet. The partial block of the pulmonary artery is described by White as cor pulmonale. In addition to the collapse syncope and pallor, White describes the tremendous dilatation of the right heart which causes marked precordial pulsation. The reflux into the vena cava causes distention and pulsation of the jugular veins. There is gallop rhythm with definite electrocardiographic signs. Roentgenography shows the greatly dilated right heart and also dilatation of the pulmonary artery.

A block of either the right or left branch of the pulmonary artery prevents blood from reaching the entire lung supplied by that branch. Blood flow to the opposite lung is greatly increased, so much so, that symptoms of congestion often develop. As contrasted with massive block, intense cyanosis and dyspnoea are seen instead of pallor and syncope. Rochet describes this type of embolism as embole asphyxique. Severe chest pain ushers in the symptoms. The right heart is moderately dilated and there is a partial reflux into the vena cava which may or may not cause distention and pulsation of the jugular veins. The thrombus may grow and obstruct the entire pulmonary artery resulting in death.

Lobar block, that is, embolism of the pulmonary arterial supply to one lobe, undoubtedly accounts for many so-called postoperative pneumonias. Following a sudden onset of chest pain, dyspnoea and cyanosis, the patient coughs up rusty sputum. There is very little pressure into the right heart and the symptoms are respiratory rather than circulatory. Such patients usually run a prolonged course and usually get well.

Factors in Embolism.—Pulmonary embolism occurs in both surgical and medical cases. In surgical cases, the type of operation and postoperative treatment apparently had little to do with the incidence. The type of anaesthesia seemed to be of no importance. Frank infection played a role in only 157% and mostly in younger patients. Only 6 (4%) of the entire group had clinical phlebitis.

Changes in the blood structure or in the blood vessel walls may definitely be of importance. That an increase in the coagulability of blood plasma may occur in previously healthy persons causing widespread thrombotic lesions with none of the usual provocative factors, such as disease or operation, was announced by Brown and Nygaard in 1935. Rosenow leans to bacterial infection as the cause of thrombosis and embolism, and Genou has described a form of aseptic thrombus which begins with bacteremia and ends with aseptic clot.

Some pathologists have held that pulmonary embolism is often the result of progressive thrombosis in the pulmonary artery. This does not appear likely for these reasons: 1. Practically all pulmonary emboli exhibit a coiled appearance which could only be produced by churning about in the heart. 2. Pulmonary embolism has been experimentally produced by injecting a mixture of ferric chloride and bismuth into the femoral vein. 3. In nearly every case of fatal pulmonary embolism, the source of the embolus can be found if enough patience is exerted in the search. Pulmonary thrombosis without embolism is possible, but uncommon.

One of the popular misconceptions of pulmonary embolism is the embolus originates in the phlebitic area. This is not always true. When thrombus exists with phlebitis, the clot is usually so adherent to the inflamed vein wall that it cannot be jarred loose and only in a small proportion of cases does thrombophlebitis result in pulmonary embolism.

Thrombus having formed and loosened and begun to crawl in a vein, the fate of the patient is sealed. The resulting embolus is not because the patient sat up, went to the bathroom, or walked too soon.

Diagnosis.—Of the 146 fatal cases observed, only 4% had phlebitis. Therefore, the usual symptoms of redness, edema and tenderness that characterize phlebitis are of little value in diagnosing thrombosis. Patients with thromboses of the large veins of the abdomen or the small veins of the uterus or prostate, present few or no symptoms of the thrombosis per se, but mild general symptoms of thrombosis or of the complex, giving rise to it do occur. The author also having repeatedly missed such symptoms at the time, has discovered later that they actually had been present. From his personal observation, he feels that restlessness, vague malaise, indefinite discomfort in the legs or abdomen, and a psychic slump have preceded embolism by several hours or days.

Laboratory Diagnosis.—1. Blood coagulation time. After operation, clotting time is shortened until the fourth day. Shortening beyond a 4-day period is suggestive of thrombosis. 2. Platelet count. Platelets are increased after operation. If, during convalescence, platelet count falls below normal and continues low, a thrombus may be developing. 3. Sedimentation rate of erythrocytes. The rate is increased during the first few days after operation. Accelerated sedimentation at other times during convalescence should be regarded with apprehension. Increased sedimentation rate is the most constant finding in thrombosis.

Treatment of Thrombosis. — Once massive thrombosis has set in, little can be done, for embolism of some extent then becomes a certainty. If the thrombophile can be recognized early, some procedures may be of value in checking the thrombosis. Low fat, low protein diet, is given to decrease clotting factors in the blood; 10 c.c. of 10% sodium thiosulphate solution intravenously each day for three days, and repeated after three-day intervals. Heparin may be injected intravenously and is harmless, and may be valuable in preventing thrombosis or growth of thrombus. The patient should be encouraged in mental and physical activity.

Treatment of Pulmonary Embolism.—Oxygen should be given for cyanosis. Papaverine is at present the most advocated drug in the medical treatment. The usual dose is one-half grain dissolved in physiologic salt solution and injected slowly intravenously. It causes generalized vasodilatation, including dilatation of the pulmonary artery, which is desirable in order to allow more blood to be squeezed past the obstruction. Digitalis may help the laboring right heart. Morphine will combat excitement. The Trendelenburg operation is a formidable task with tremendous odds against success, but may be the patient's last chance.

Prevention.—Mental and physical activity during convalescence is important. Postoperative patients should not be kept in bed any longer than necessary. Low fat, low protein diet, is least conducive to thrombotic changes. Excessive fluid loss should be combatted. Patients should be studied carefully before and after operation to detect evidence of tendency to thrombosis. It is not necessary to treat all postoperative patients for thrombosis, but only those showing such tendency or suspicious symptoms of early thrombosis.

Comment: Dr. Robertson's clinical study of 146 cases of fatal pulmonary embolism should be of great interest to every surgeon. His observation that embolism rarely follows phlebitis coincides with the reviewer's experience. We rarely see pulmonary embolism following milk leg, although we do often see small pulmonary infarctions accompanying various forms of phlebitis.

RADIOLOGY

J. A. Beals, Greenville

Roentgen Therapy of Sinusitis.—Dr. Fred M. Hodges, of Richmond, Va., recent president of the Southern Medical Association, is widely known for his long continued, earnest, always conservative advocacy of roentgen ray treatment for various inflammatory conditions. Before the Fifth International Congress of Radiology in September 1937 he presented an article on the treatment of selected cases of infection of the nasal accessory sinuses. This article is published in the American Journal of Roentgenology, April, 1938.

His attitude may be illustrated by two quotations: " - - - a whole-hearted and sincere co-operation between the rhinologist and radiologist is absolutely necessary - - -," and, "The radiologist who attempts to treat every sinus infection regardless of type - - - will surely bring this method into disrepute—."

Hodges considers sinus infections in five groups.

The first group comprises patients who suffer from recurring colds and are found to have an associated sinus infection. Such acute and subacute infections usually yield to routine treatment with astringents, packing, suction, etc., and, if allergic, should be referred to an internist experienced in allergy. Some of these sinuses, however, fail to respond and retain a very thick membrane, with granulations. This group has responded more favorably to roentgen treatment than any other. Radical surgery can always be resorted to later, if necessary, and is not rendered more difficult by the x-ray treatment. The author warns that unless drainage is assured, by antral puncture if necessary, severe reactions may result from the x-ray treatment. However, in acute pansinusitis, and in young children, he believes treatment by small doses of x-ray may be justifiable at times, without previous puncture.

The second group includes cases that have had chronic cough for months or years, with basal bronchitis and perhaps early bronchiectasis as a result of chronic sinus disease with marked thickening of the mucoperiosteum. The pathologic process is often resistant to treatment by the rhinologist and the allergist. These cases often respond favorably when the condition has not been too long standing, and the necessity for radical surgery (or the alternative of inaction) may thus be averted. The author believes the cough is benefited by small doses of rays applied to the lung bases.

A third group of cases classed as atrophic sinusitis, should not be treated by x-rays.

A fourth group is that of chronic hyperplastic sinusitis with early polyp formation. The results in this group are not so encouraging as in the first two, but justify a trial by x-ray before surgery is resorted to.

A fifth group is that with old extensive polypoid changes where all the sinuses are absolutely dense. A few of these receive some clinical benefit from larger doses of high voltage x-rays heavily filtered, but most of them are not helped.

Hodges gives his usual technique as 130 kv. (peak, 6 mm. aluminium filter, 25 cm. distance; about 100 to 300 r, measured in air. (The more acute infections should receive the smaller dose.) This is divided into 3 or 4 treatments within a period of ten days to two weeks.

Magnesium Tetraiodophenolphthalein in Oral Cholecystography.—T. O. Memees and H. C. Robinson of Grand Rapids, Mich., in the American Journal of Roentgenology for March, 1938, claim credit for the introduction of oral cholecystography in 1925. Since then the sodium salt has been used exclusively, although Graham, Cole and Copper originally tested two chemical compounds. The sodium compound with the dye, however, is mildly toxic, often causing nausea, vomiting and diarrhea, and has a slightly unpleasant taste. The authors give a method for preparing the magnesium salt, which, after a brief clinical trial they claim to be superior, in that it is practically tasteless, and, in their first 100 cases only 22.6 per cent experienced mild toxic symptoms, whereas the sodium compound produces symptoms in 56.9 per cent of cases, and these symptoms were generally more severe. If this experience is borne out by others the magnesium compound should soon become commercially available.

Aqueous Preparations to Supplant Oil in Roentgenography., H. Lilienthal, of New York, in the American Journal of Roentgenol. April 1938, reports the use of a 30 per cent suspension of iodoform in a 33.5 per cent solution of syrupy glucose in distilled water, as an opaque medium for bronchography and for outlining other cavities. The preparation has the distinct advantage over the commonly used radiopaque iodized vegetable oils in that it is not viscid and is eliminated or absorbed much more rapidly than the oils. The shadows are equally or satisfactorily dense. The author believes it can be used in tubercular lungs with impunity which is not true of the oils. However, the author described no experimental data and no extensive experience with the preparation. Admittedly it has the disadvantage that it cannot be heat sterilized because the iodoform is decomposed.

STATE BOARD OF HEALTH

On June 22-23, members of the State Board of Health held their semi-annual business session in the library of the Old Capitol. On the day prior the Executive Committee: Dr. J. W. Lipscomb, Columbus, chairman; Dr. S. E. Eason, New Albany; and Dr. Felix J. Underwood, Jackson, secretary, visited the Sanatorium for their annual conference with Dr. Henry Boswell there.

Licenses to practice medicine in Mississippi were issued by the Board to the following physicians: (by examination)—

Dr. Catherine B. Brummett, University; Dr. Chester C. Brummett, Nashville, Tenn.; Dr. William Busby, Jr., Itta Bena; Dr. James A. Clark, Jr., Ruleville; Dr. H. L. Cockerham, Jr., Gunnison; Dr. Henry C. Dorris, Jackson; Dr. Mary E. Fatherree, Greenwood; Dr. James S. Fisackerly, Blaine; Dr. Isaac C. Farmer, Mendenhall; Dr. James L. Fuller, West Point; Dr. Lyne S. Gamble, Greenville; Dr. Alfred Habeeb, Vicksburg; Dr. George Harvey, Jr., Canton; Dr. Fred B. Hodges, Jr., Wesson; Dr. Nathaniel C. House, Enid; Dr. Joseph A. Hull, DeKalb; Dr. Warren C. Jones, Meridian; Dr. Edward H. Mabry, Goodman; Dr. George T. McPhail, Calhoun City; Dr. Robert D. Moreton, Brookhaven; Dr. John A. Murfee, Okolona; Dr. R. H. Pegram, Jr., Tupelo; Dr. Ernest D. Reynolds, Hattiesburg; Dr. James E. Sams, Meridian; Dr. Ralph Sneed, Lafayette Springs; Dr. Dominic Tumminello, Gunnison; Dr. Homer S. Watkins, Noxapater; Dr. Edwin H. West, Purvis; Dr. David B. Wilson, Yazoo City; Dr. Jack K. Wilson, Clinton; (by reciprocity): Dr. Nelson L. Barnett (col.) Belzoni; Dr. James E.

Coe, Batesville; Dr. Tillman B. Collum, Liberty; Dr. William M. Dabney, Baldwyn; Dr. Clarence H. Denser, Whitfield; Dr. Aubrey A. Donaldson, Thaxton; Dr. George D. Dicks, Natchez; Dr. Andrew Hedmeg, Natchez; Dr. John C. Henthorne, Jackson; Dr. George W. Jackson, Sardis; Dr. Isaac H. Jones, Meridian; Dr. John A. MacNeal, Clarksdale; Dr. Estelle A. Magiera, Whitfield; Dr. D. Ben Martinez, Biloxi; Dr. James E. Towne, Corinth (Osteo); Dr. Victor D. Thomas, Whtfield; Dr. Willard L. Waldron, Whitfield; Dr. John W. Williams, Greenville.

Members of the Board include: Dr. J. W. Lipscomb, president, Columbus; Dr. S. E. Eason, New Albany; Dr. L. B. Austin, Rosedale; Dr. B. J. Shaw, Slate Springs; Dr. W. H. Banks, Philadelphia; Dr. H. L. McKinnon, Hattiesburg; Dr. L. W. Brock, McComb; Dr. John B. Howell, Canton; Dr. William R. Wright, Jackson; and Dr. Felix J. Underwood, secretary, Jackson.

From June 13-17, Dr. Felix J. Underwood attended the meeting of the American Medical Association in San Francisco, California, where he was a delegate of the Mississippi Medical Association. Prior to this meeting Dr. Underwood spent three days in Portland, Oregon, and Vancouver, British Columbia. In Portland he attended the meeting of the Western Branch of the American Public Health Association and in Vancouver visited the Metropolitan Health District partly supported by the Rockefeller Foundation, of which Dr. Underwood is a board member.

The Health District in Vancouver began functioning in March, 1936. Through it the work of official and non-official organizations engaged in public health are being correlated in a unified organization of which Vancouver is the center. The progress of this venture is being watched with interest by health workers everywhere.

On the first and third Saturdays in June staff conferences of the State Board of Health were held in the library with Dr. R. N. Whitfield, director of Vital Statistics, and Dr. H. C. Ricks, director of the State Hygienic Laboratory, presiding. At the first meeting Dr. Whitfield outlined the work of the Vital Statistics Division; and on the third Saturday Dr. Ricks summarized the work of the laboratory, illustrating the accepted method of packing specimens for mailing. "Physicians of the state will now receive improved service on their specimens," Dr. Ricks stated, "in view of the fact that time formerly spent in classification can now be used to advantage in actual work."

On June 20, Dr. Frances C. Roberts and Miss Ruth Cushman, Regional Consultants, Federal Children's Bureau, New Orleans, visited the State Board of Health in connection with Mississippi's Maternal and Child Health program.

Dr. Underwood attended the meeting of the Board of Scientific Directors, Rockefeller Foundation, New York City, on June 27.

Out-of-state visitors to the State Board of Health during June included: Alma H. Scott, director of Headquarters, American Nurses' Association, New York City; Dr. Virginia E. Webb, 318 Civic Courts Building, New Orleans; Edna E. Martz and Rhea Sylvester, Tennessee Department of Public Health, Nashville.

Dr. R. N. Whitfield, director of Vital Statistics, and district chairman of the American Association of State Registration Executives, conducted a meeting of this group in Nashville, Tennessee, June 15-16. Problems of registration were discussed by representatives of the nine states in this district, Kentucky, Virginia, North and South Carolina, Tennessee, Mississippi, Alabama, Georgia, and Florida.

A new full-time county health department has been voted by the Alcorn County Board of Supervisors, with Dr. R. H. DeJarnette of Rolling Fork named the new director. Until July 1, Dr. DeJarnette was health officer with the Sharkey-Issaquena unit. Other changes too have occurred in county health department personnel, effective July 1. Following the resignation of Dr. John W. Shackelford to go with the Oklahoma Department of Public Health, Dr. George W. Mast of Holmes County has become the director of the Washington County unit. Succeeding Dr. Mast in Holmes County is Dr. H. N. Waggoner, formerly engaged in general practice in Clarksdale.

Dr. Joaquin Fernandez Melendez of Havana, Cuba, observed procedures of the State Board of Health during the month of June. One week was spent by the Cuba physician at the Pike County Health Department.

The State Board of Health radio program is given each Saturday from 9:30 to 9:45. During June the calendar was as follows:

June 4.—Mr. H. A. Kroeze(director, Sanitary Engineering—"Tourist and Trailer Camp Sanitation."

June 11.—Miss Ora E. Phillips, R. N., advisory field nurse—"Public Health Nursing."

June 18.—Dr. A. L. Gray, director Preventable Disease Control—"Predecessor of Crutches."

June 25.—Mrs. M. L. Legler, member of State Board, Mississippi Congress of Parents and Teachers—"The Part of the P.-T. A. in a Community Health Program."

Jackson, Felix J. Underwood,
July 2, 1938. Executive Officer.

MISSISSIPPI COUNTY HEALTH OFFICERS AS OF JULY 1, 1938

*Adams, Dr. Andrew Hedmeg, Natchez; *Alcorn, Dr. R. H. DeJarnette, Corinth; Attala, Dr. C. A. Pender, Kosiusko; *Amite, Dr. T. B. Collum, Liberty; Benton, Dr. Frank Ferrell, Ashland; *Bolivar, Dr. R. D. Dedwyler, Cleveland; Calhoun, Dr. F. L. McGahey, Calhoun City; Carroll, Dr. M. E. Arrington, Vaiden; Chickasaw, Dr. J. Rice Williams, Houston; Choctaw, Dr. J. James, Ackerman; Clarke, Dr. H. C. Watkins, Quitman; Clay, Dr. J. E. Ellis, West Point; *Coahoma, Dr. N. C. Knight, Clarksdale; *Copiah, Dr. J. C. McGuire, Hazlehurst; Covington, Dr. A. S. Calhoun, Mount Olive; DeSoto, Dr. C. W. Emerson, Hernando; *Forrest, Dr. B. D. Blackwelder, Hattiesburg; Franklin, Dr. J. C. McGehee, Bude; George, Dr. R. F. Ratliff, Lucedale; Greene, Dr. A. Graham, Leakesville; Grenada, Dr. T. J. Brown, Grenada; *Hancock, Dr. C. M. Shipp, Bay St. Louis; *Harrison, Dr. D. J. Williams, Gulfport; *Hinds, Dr. W. [illegible]. Noblin, Jackson; *Holmes, Dr. H. N. Waggoner, Lexington; *Humphreys, Dr. J. W. Barkley, Belzoni; Itawamba, Dr. J. T. Senter, Fulton; *Jackson, Dr. R. G. Lander, Pasgacoula; Jasper, Dr. J. B. Thigpen, Bay Springs; Jefferson, Dr. S. R. Towns, Union Church; Jefferson Davis, Dr. V. N. Nichols, Carson; *Jones, Dr. A. R. Perry, Laurel; Kemper, Dr. V. M. Creekmore, Dekalb; Lafayette, Dr. E. S. Bramlett, Oxford; *Lamar, Dr. J. N. Mason, Purvis; *Lauderdale, Dr. D. V. Galloway, Meridian; Lawrence, Dr. T. F. Conn, Monticello; Leake, Dr. W. S. Martin, Carthage; *Lee, Dr. W. H. Cleveland, Tupelo; *Leflore, Dr. L. A. Barnett, Greenwood; *Lincoln, Dr. W. R. May, Brookhaven; Lowndes, Dr. C. E. Lehmberg, Columbus; *Madison, Dr. Ray H. Diggs, Canton; Marion, Dr. D. A. Ratliff, Columbia; *Marshall, Dr. V. B. Harrison, Holly Springs; *Monroe, Dr. Chas. H. Love, Aberdeen; Montgomery, Dr. E. C. O'Cain, Winona; Neshoba, Wr. W. J. Stribling, Philadelphia; Newton, Dr. W. J. Pennington, Decatur; Noxubee, Dr. E. M. Murphy, Macon; Oktibbeha, Dr. J. F. Eckford, Starkville; Panola, Dr. A. P. Alexander, Como; *Pearl River, Dr. R. J. Jones, Poplarville; Perry, Dr. B. T. Robinson, New Augusta; *Pike, Dr. T. Paul Haney, Jr., McComb; Pontotoc, Dr. R. P. Donaldson, Pontotoc; Prentiss, Dr. W. H. Anderson, Booneville; Quitman, Dr. A. C. Covington, Marks; Rankin, Dr. W. H. Watson, Brandon; Scott, Dr. W. E. Anderson, Forest; *Sharkey-Issaquena, [illegible], Rolling Fork; Simpson, Dr. R. E. Giles, Mendenhall; Smith, Dr. W. M. Coursey, Raleigh; Stone, Dr. S. E. Dunlap, Wiggins; *Sunflower, Dr. C. R. Gillespie, Indianola; *Tallahatchie, Dr. J. P. Ward, Charleston; Tate, Dr. S. E. Eason, Coldwater; Tippah, Dr. C. M. Murry, Ripley; Tishomingo, Dr. T. P. Haney, Iuka; Tunica, Dr. W. H. Williams, Tunica; *Union, Dr. I. B. Trapp, New Albany; Walthall, Dr. J. J. Pittman, Tylertown; Warren, Dr. F. Michael Smith, Vicksburg; *Washington, Dr. Geo. W. Mast, Greenville; Wayne, Dr. W. P. Gray, Waynesboro; Webster, Dr. W. H. Curry, Eupora; Wilkinson, Dr. E. M. Butler, Centreville; Winston, Dr. W. W. Hickman, Noxapater; Yalobusha, Dr. R. J. Criss, Coffeeville; *Yazoo, Dr. H. L. McCalip, Yazoo City.

COAHOMA COUNTY MEDICAL SOCIETY AND CLARKSDALE HOSPITAL MEDICAL STAFF

The Coahoma County Medical Society and Clarksdale Hospital Medical Staff met in the Alcazar Hotel, July 13, at 12 o'clock. The vice-president, Dr. D. H. Griffin, presided. Minutes of the previous meeting were approved as read.

Provision of a staff for the Clarksdale Negro Hospital was fully discussed and on motion of J. L. Levy, seconded by Warfield, it was decided that the Coahoma County Medical Society would be the staff and the same constitution and by-laws used by the Clarksdale White Hospital were adopted. Motion passed.

Dr. N. C. Knight announced that a chest clinic would be conducted next week at the health department by the Field Unit of the Sanatorium.

Dr. L. H. Brevard then presented an interesting case report which was discussed fully.

A motion picture entitled "The Anemias" was then shown.

Dr. J. L. Levy volunteered to present a paper for the next meeting. There being no further business the society adjourned.

Clarksdale, N. C. Knight,
July 16, 1938. Secretary.

COAST COUNTIES MEDICAL SOCIETY

At the regular monthly meeting of the Coast Counties Medical Society in Biloxi, July 6, Dr. F. O. Schmidt read a paper on "Volvulus of Ceacum." He presented a most interesting paper on this subject. He mentioned several conditions which cause the volvulus, and went into detail in regard to the symptoms. Under treatment he advised ceacotomy, and, if necessary, fixation to the abdominal wall. He reported a case of volvulus of ceacum.

The Society lost a valuable member when Dr. O. L. Bailey, Ocean Springs, died June 22. Dr. Bailey will be greatly missed, and he left

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*Counties having full-time Health Departments behind a host of friends.

Dr. Charles Le Baron, Gulfport, has been seriously ill and we are pleased to state that he is now able to be up and in a short time will be able to resume his work.

Sincerely yours,

Biloxi, D. L. Hollis,
July 7, 1938. Secretary.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

The regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Vicksburg, Tuesday, July 12, with 17 members and 8 guests present. Dr. B. B. Martin, Jr., president, presided. After supper served at 7 p. m., the program devoted to diseases of the blood was presented under the chairmanship of Dr. Nathan B. Lewis, with the principal speaker Dr. Henry G. Rudner, Memphis, who presented the subject, "Agranulocytosis."

The Committee on Public Health and Legislation presented a report of a case having to do with alleged practice of medicine without a license, now before the court, and the society pledged its support of the prosecution.

The next meeting of the society will be held at the Mississippi State Charity Hospital, Tuesday, August 9. The subject will be "Gonorrhea," and the committee in charge consists of Drs. J. A. K. Birchett, Jr., chairman, H. H. Haralson, W. C. Pool, F. Michael Smith. The speakers will include Dr. Temple Ainsworth, Jackson, on "Sulfanilamide in the Treatment of Gonococcic Infections in the Male," and Dr. F. Michael Smith, Vicksburg, on "Some Thoughts on a Gonorrhea Control Program."

NORTH MISSISSIPPI MEDICAL SOCIETY

The Quarterly Meeting of the North Mississippi Medical Society, New Albany, Miss., Wednesday, July 20, 1938, Methodist Church, 2:00 p. m.

Program

1. Invocation.
2. Reading of Minutes and Other Business.
3. "Vital Problems Concerning the Mississippi Medical Association.—Dr. J. E. Green, President, State Medical Association, Laurel, Miss.
4. "Louis Pasteur, The Father of Modern Medicine."—Dr. J. P. Wall, President-elect, State Medical Association, Jackson, Miss.
5. "The Relation of the Endocrine Glands to Hyperinculinism."—Dr. Seale Harris, Birmingham, Ala.

A. J. McIlwain A. H. Little
President Secretary
Batesville, Oxford.

DESOTO COUNTY

In publishing the autobiographies of the members of our local medical society in this column, the first was the life of our oldest member, Dr. A. L. Emerson. In this issue Dr. H. M. Wadsworth, the youngest member, is the subject.

An Autobiography of Dr. H. M. Wadsworth

I was born at Ripley, Tenn., June 30, 1911. My father was an itinerant preacher of the Methodist Episcopal Church South, which in charge of his duties involved frequent change of residence, so I lived in many points in West Tennessee. I graduated from Lambuth College, Jackson, with an A.B. degree in 1932. I played all sports while in college, especially football. I secured my medical degree from the University of Tennessee, Memphis, in 1935. I served my internship in Hotel Dieu New Orleans. After completing my internship, I enjoyed a trip to South America, visiting the larger cities and other points of interest. I began the general practice of medicine in 1936 in the office of the late Dr. A. J. Weissinger of Hernando.

An auspicious event of my life was when I happily married Miss Ruth Scherf, R.N., whom I met while interning in New Orleans. We were made happy by the birth of our first born on April 18, 1938. He has my name in full, Henry Manley Wadsworth, Junior.

I am vice-president of the DeSoto County Medical Society and have been for two years, a charter member of the Hernando Rotary Club, also a member of the Board of Stewards of the local Methodist church. I covet to excel in things worth while in my home, church, state and profession.

* * *

Mrs. Perry Funk of Frostproof, Fla., is visiting her parents, Dr. and Mrs. M. B. Jernberg, at Hollywood. The Jernbergs formerly lived at Walls, where Mrs. Funk is remembered as Martha Jernberg.

Mrs. David G. Hughes, nee Ruth Rhodes, and children are visiting their parents and grand-parents, Dr. and Mrs. J. A. Rhodes of Horn Lake. We hope to publish an autobiography of Dr. Rhodes at an early date. Knowing something of the good doctor's life, we know it will be a most interesting paper.

After a visit to the Rhodes, Mrs. Hughes and children, accompanied by Mr. Hughes, will take a cross country trip before returning to their home in Oxford.

Drs. Felix J. Underwood and R. N. Whitfield of the Mississippi State Board of Health have published an interesting volume, "Public Health and Medical Licensure in the State of Mississippi, 1798-1937." Among those active in the early days of the Board of Health and the Medical Association was Dr. S. V. D. Hill of Macon who was my father's partner for nineteen years, an expert on diagnosis, a physician of no mean ability and a gentleman of the old school.

"Nominations of county health officers were made for the first time by the Mississippi State Board of Health on April 2, 1880."

Dr. J. H. Westbrook of Hernando was appointed for this county; Dr. H. A. Gant of Water Valley for Yalobusha County. Dr. Gant who now lives at Columbia, Tenn., is probably the oldest of this list of good and worthy men. Others on the list who were elevated to the presidency of the State Medical Association are Drs. B. F. Ward of Winona, H. A. Minor of Macon and Carroll Kendrick of Corinth.

Among the early members of the Board of Health, we note the names of Dr. H. H. Haralson, now of Vicksburg; while the doctor has retired his son-in-law, and grandsons, the Johnstons, are carrying on efficiently. And Dr. P. W. Rowland of Oxford, who is much interested in the Rowland Medical Library at the University, is active in other good ways. Both of these gentlemen are past presidents of the Mississippi State Medical Association.

The Preventorium for children opened in 1929, is a most valuable adjunct to the state health authorities. Among other agencies that assist in this work is the Woman's Auxiliary of the State Medical Association.

In this column for July we made mention of physicians in Memphis that came there from Mississippi, in all probability natives of the state. In this issue we add to that list. There are no doubt others. The list is as follows: Drs. William Milton Adams, W. G. Alford, W. R. Bethea, Chas. D. Blassingame, R. L. Bowlin, C. M. Chilton, Casa Collier, Howard Durley, James O. Gordon, W. L. Howard, A. G. Hudson, D. C. McCool, James B. McElroy, J. L. McGeehee, Francis Murphey, T. R. Montgomery, H. W. Priddy and H. K. Turley. They have all done well in their profession.

At the Annual Southern Pediatric Seminar, a non-profit post-graduate summer course devoted to "Better Babies in the South" at Saluda, N. C., each essayist is an outstanding pediatrician of the South. Noteworthy is the fact that every university and medical school in the South is represented by a distinguished alumnus on the faculty.

Man wonders about the restless sea, the flowing water, the sight of the sky, and forgets that of all wonders man himself is the most wonderful.—Saint Augustine.

David in the 139 Psalm, verse 14.—"For I am fearfully and wonderfully made: marvelous are thy works."

Rt. 4, Memphis, Tenn. L. L. Minor,
July 8, 1938. County Editor.

HUMPHREYS COUNTY

Mrs. G. M. Barnes and sons, Ray and Spencer, have returned from a very delightful trip to California and other points of interest.

Visiting in the home of Dr. and Mrs. J. C. Bell is Mrs. Bell's sister, Miss Grace Beattie of Colorado Springs.

Dr. Owen Royce is doing special work at Sanatorium this summer. He spent several days with his parents in Isola before taking over his duties.

Mr. and Mrs. Paul Crider, Brownsville, Tenn., and Miss Mary Frances Pryor, Hollondale, spent the week-end of the 4th with Dr. and Mrs. J. W. Jackson.

Dr. Eckford Waddlington and family, Florence, visited his parents here a part of last month.

Mrs. J. C. Higdon is visiting friends in Memphis for several weeks.

Belzoni, J. W. Jackson,
July 9, 1938. County Editor

LEFLORE COUNTY

Dr. and Mrs. R. E. Wilson gave a buffet supper Wednesday night at 7, June 1, at their home on River Road in honor of Dr. and Mrs. W. E. Denman, Jr., who are leaving soon for New York City.

There were only ten doctors present at the regular staff meeting of the Greenwood Leflore Hospital, Thursday night, June 2. During June, July, and August supper will not be served. After the regular business, and reports of cases, illustrated films of cataract operation, and local thyroidectomy were shown. Deaths in hospital during the month, premature baby at 7th month, breech extraction, and a case of abscess of the lungs following lobar pneumonia, were discussed.

Among the visiting doctors in Greenwood during the month were Drs. E. J. Hudspeth and W. J. Chapman, Doddsville, W. R. Best, Scobey, J. R. Hightower, Natchez.

We extend our sympathy to Dr. J. A. Crawford in the loss of his father, who died May 26 at Philadelphia. We are sorry to lose Dr.

Crawford and his family from Greenwood, as they have moved to Philadelphia to make their home.

Dr. and Mrs. W. B. Dickins spent Sunday, June 5, at Batesville, visiting relatives.

Dr. and Mrs. B. B. Harper, Itta Bena, attended the meeting of the Central Medical Society at Jackson, June 7.

Dr. and Mrs. R. B. Yates visited in New Orleans June 7 to 10, attending the graduation of their daughter, Miss Marjorie, at Sophie-Newcomb.

Dr. Mary Elizabeth Fatheree, Greenwood, graduated at the University of Tennessee, Memphis, June 14. She will serve her internship at Chicago, beginning July 1.

Dr. R. B. Yates was called to Philadelphia to see his brother, Dr. Claude Yates, who was quite ill, June 6. We are glad he is much better at this time.

Miss Sara Hightower, daughter of Dr. and Mrs. L. H. Hightower, Itta Bena, and Mr. L. A. Nordan, Jr., Forrest, were married June 19 at the home of the bride's parents.

Dr .and Mrs. Portwood, Schlater, are visiting in Illinois for a few days.

Dr. and Mrs. F. M. Sandifer have been vacationing on the coast at Mobile, fishing.

Drs. W. E. Denman, R. B. Yates, and Henry Kennedy spent two days deep sea fishing on the Mississippi coast recently in a big fish fry in Dr. Yates' back yard at their home on River Road. Saturday night, June 25.

Mrs. Phil R. Polk, wife of Dr. Polk, Morgan City, is a patient in the Greenwood Leflore Hospital.

Greenwood, W. B. Dickins,
July 1, [illegible], County Editor.

WASHINGTON COUNTY

Dr. George W. Mast, recently of Lexington, has taken over the duties of director of the Washington County Health Department. He succeeds Dr. John W. Shackelford whose removal to Oklahoma City was reported last month. Dr. Mast has been serving as health department director of Holmes County. He and his wife are cordially welcome in Greenville and Washington County.

Dr. H. A. Gamble, Greenville, attended the graduation of his son, Lyne Gamble, from Vanderbilt Medical School, in June. Lyne spent a few anxious days at home in preparation for the Mississippi State Board examination which he, of course, passed with credit. He is now beginning his internship at Charity Hospital, New Orleans.

Dr. and Mrs. G. W. Petersen, Greenville, received a short visit in June from Mrs. Petersen's mother, Mrs. J. S. Wilson of Manilla, P. I. Mrs. Petersen later accompanied her mother on a visit to friends and relatives in Madison, Wisconsin.

Dr. and Mrs. A. V. Murry and their very young daughter, Greenville, spent a two weeks' vacation in June with the young lady's grandparents, Mr. and Mrs. C. M. Murry, Ripley.

Dr. and Mrs. P. G. Gamble and their young son and daughter started early in July on a vacation to be spent, for the most port, at Cape Cod, Mass.

Dr. D. C. Montgomery and family have recently returned from a vacation trip in various places on the Atlantic Coast.

Dr. J. A. Beals, Greenville, has recently announced his resignation from the Gamble Bros. and Montgomery Clinic, to take a position as radiologist with a hospital in Jacksonville, Florida, about September 1 . While Dr. Beals and his family regret to sever connections that have been most pleasant, they are returning to former friends and associates.

Mrs. O. H. Beck and daughters, Greenville, spent several days in June visiting friends and relatives in Chattanooga, Tenn., and Jackson. Dr. Beck reports he has not been able to get in much vacation for himself aside from a few fishing trips.

Greenville, J. A. Beals,
July, 8, 1938. County Editor.

HOSPITAL STAFF TRANSACTIONS

MISSISSIPPI STATE HOSPITAL ASSOCIATION, Tenth Annual Session, Gulfport, May 8, 1939.

Aberdeen Hospital: Third Monday, each month, 7:00 p. m.

Anderson Infirmary: First Friday, each month, 6:30 p. m.

Biloxi Hospital: First Thursday, each month, 7:30 p. m.

Bramlett Hospital: Third Wednesday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 12:00 noon.

Field Memorial Hospital: Second Thursday, each month, 6:30 p. m.

Gilmore Sanitarium: Third Thursday, each month, 8:00 p. m.

Greenwood-Leflore Hospital: First Thursday, each month 6:30 p. m.

Grenada Hospital: Second Tuesday, each month, 6:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month, 7:30 p. m.

Holmes County Community Hospital: Second Thursday, each month, 7:00 p. m.

Houston Hospital: Last Thursday, each month, 7:30 p. m.

Ivy Hospital: First Monday, each month, at 7:00 p. m.

Jackson County Hospital: Second Thursday, each month, except July and August, 7:00 p.m.

Jackson Infirmary: Last Tuesday, each month, except three summer months, 7:00 p.m.

King's Daughters Hospital, Brookhaven: First Tuesday, each month, 7:00 p. m.

King's Daughters Hospital, Greenville: First Wednesday, each month, 7:00 p. m.

King's Daughters Hospital, Gulfport: Third Thursday, each month, 8:00 p. m.

King's Daughters Hospital, Yazoo City: First Monday, each month, 7:30 p. m.

Macon Hospital: First Tuesday, each month, 7:30 p. m.

Magee General Hospital: Twenty-fifth each month, 7:30 p. m.

Mayes Hospital: First Monday, each month, 2:30 p. m.

McComb City Hospital: First Tuesday, each month, 6:00 p. m.

McComb Infirmary: Second Thursday, each month, 7:00 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Mississippi State Hospital, Vicksburg: Third Tuesday, each month, 7:00 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

New Albany Hospital and Clinic: Second Tuesday, each month, 8:00 p. m.

Newton Hospital: Second Thursday, each month.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Oktibbeha Hospital: Last Thursday, each month, 7:30 p. m.

Oxford Hospital: Last Monday, each month.

Pontotoc Clinic: First Tuesday, each month, 7:30 p. m.

Rush's Infirmary: First Friday, each month, 7:30 p. m.

Scott County Hospital: Third Wednesday, each month.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

Tylertown Hospital: Second Thursday, each month, 7:00 p. m.

U. S. Veteran's Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each

VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Monday, July 11, and after a supper served at 6:30 p. m., was called to order by the president, Dr. Leon S. Lippincott, with twelve members and three guests present. The program included:

Reports from the Records Department and Analysis of the Work of the Hospital.

Special Case Reports—

1. Carcinoma of Breast.—Dr. A. Street. Discussed by Dr. L. S. Lippincott.

2. Carcinoma of Ovary.—Dr. J. A. K. Birchett, Jr.
Discussed by Dr. A. Street.

3. Human Sterility—Motion Picture (Courtesy of Winthrop Chemical Company).—Dr. R. A. Street, Jr.

Report of Vital Statistics.—Dr. F. Michael Smith, Director, Warren County Health Department.

Demonstration of Selected Roentgen Ray Studies.—Fracture of Thoracic Vertebrae; Pulmonary Tuberculosis (Two Cases); Cholelithiasis (Two Cases); Renal Calculus (Two Cases).

Three-Minute Reports of the Literature of the Month.—Dr. A. Street—Postoperative Pulmonary Embolism; Dr. L. S. Lippincott — Treatment of Typhoid.

The next meeting of the staff will be held Wednesday, August 10, 1938.

HONOR ROLL

The following have contributed to this number of the official journal:

County Editors: DeSoto, L. L. Minor; Humphreys, J. W. Jackson; Leflore, W. B. Dickins; Washington, J. A. Beals.—4.

Societies: Coahoma County, N. C. Knight; Coast Counties, D. L. Hollis; Issaquena-Sharkey-Warren; North Mississippi, A. H. Little. —4.

Hospitals: Clarksdale Hospital, N. C. Knight; Vicksburg Sanitarium.—2.

Interpreting Medical Literature: E. T. White, Alston Callahan, Felix J. Underwood, A. Street, J. A. Beals.—5.

Others: Felix J. Underwood.

Total: 16.

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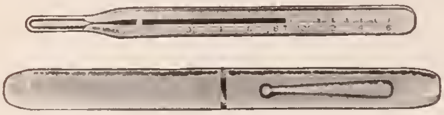

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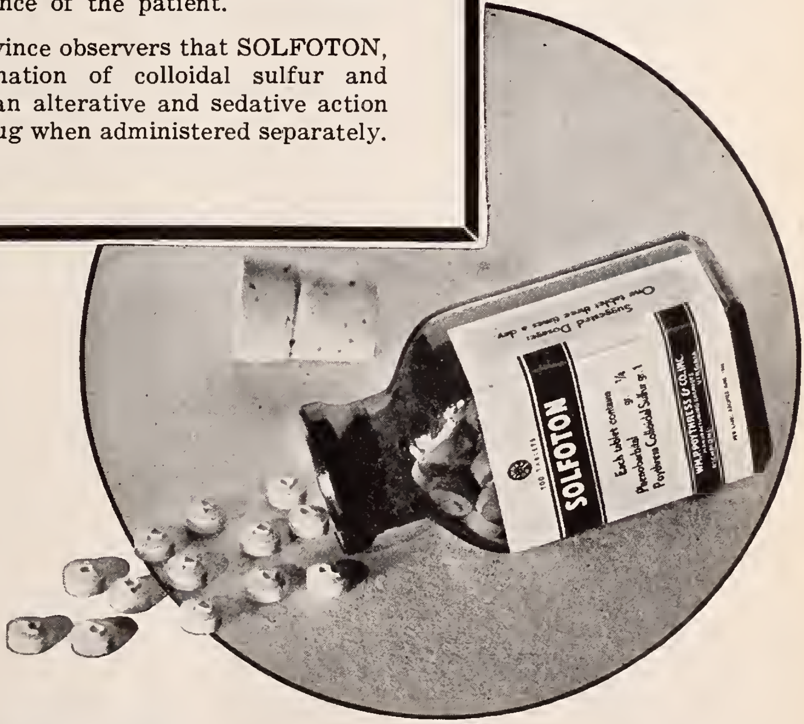

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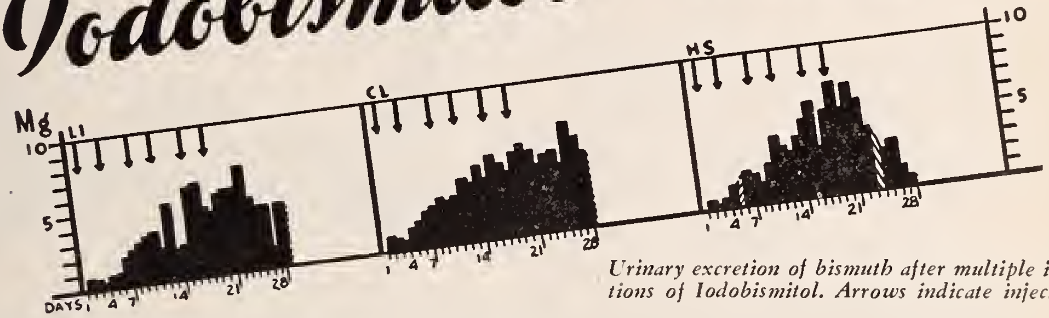

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[1] Sollmann, T., Cole, H. N., Henderson, K., *et al.: Amer. J. Syph., Gon. & Ven. Dis.* 21:480 (Sept.), 1937.

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An Evaluation of a Number of Procedures Recommended for the Prevention of Poliomyelitis*

S. D. KRAMER, M.D.
BROOKLYN, N. Y.

I HAVE BEEN asked to evaluate a number of procedures recommended for the prevention of poliomyelitis. I should like to prefix my remarks with a brief summary of the outstanding contributions in the history of this disease, upon which many of our concepts are based.

Poliomyelitis is not a new disease, it was apparently known in Biblical times; as suggested by a stele in Copenhagen of the 18th dynasty (1580-1350 B.C.). It depicts a portrait of an Egyptian prince presenting a deformity which could only have resulted from an attack of poliomyelitis. More recently a study of the bones from a disinterred cemetery in Greenland, dating back to the 15th century, established the presence of this disease, although in our own memory and in medical historical writings, the disease had apparently been unknown.

It is interesting and not altogether unexpected that our first description of the disease came from an orthopedic surgeon. Heine, a member of a family of physiotherapists and orthopedic surgeons, gave us in 1840 our first most complete description of the clinical as well as the orthopedic phases of this disease. Fifty years late (1890), Medin, a clinician, rediscovered and described the clinical phases of the disease and to some extent its pathology.

In our own country the first description of an outbreak was by a health officer in Vermont, Dr. Caverly[1], whose notes upon a disease quite unknown to him at that time gave us a most faithful description of the epidemiological and clinical features of poliomyelitis.

In 1905 Wickman[2], in a larger, more comprehensive study, reported an outbreak of this disease on the Scandinavian peninsula. In this report he found a description of the clinical disease and an attempt at classification. This author also gave a good description of the pathology and localized the essential and distinctive lesions in the ganglia of the anterior horns of the cord. Both Caverly and Wickman described non-paralytic and abortive forms of the disease and suggested its contagious nature.

As has been true of many diseases, small progress was made to a better understanding of poliomyelitis until it was reproduced in the experimental animal. This was first accomplished by Landsteiner and Popper[3] in 1909, and almost simultaneously by Flexner and Lewis[4] in this country. Landsteiner and Popper first produced the disease in monkeys by the inoculation of heavy suspensions of human material intraperitoneally into monkeys. Flexner and Lewis produced the disease by means of intracerebral inoculations of cord suspension and gave us a technique for carrying our infective agent indefinitely through monkey passage. With these outstanding contributions began what might be termed the experimental period in the disease.

Shortly after his preliminary observations Flexner reported the presence in the blood serum of human beings and of animals who had passed through an attack of the disease, of an immune substance referred to as neutralizing substance, (because of the power of such convalescent serum to neutralize or render non-infective otherwise potent virus).

With the help of these experimental findings, we have been able to carry on certain epidemiologic studies and to submit a number of our concepts to experimental procedures and proof.

A number of factors have, however, strongly militated against the rapid accumulation of experimental evidence, and as a result many of our present concepts of the disease are still based on extraordinarily little data.

In the first place, poliomyelitis is a relatively rare disease, and except in communities where it is more or less endemic it is the privilege of few physicians to observe a sufficient number of instances of the disease to give them any great familiarity with it. In the second place, up to the present time, we have been completely unsuccessful in obtaining an animal other than the monkey to take the disease. The difficulties in and the expense of obtaining the experimental animal have been large factors in limiting the scope of investigations. Furthermore, even though poliomyelitis has been established in the monkey, this is not so easily accomplished. For every successful infection obtained in the experimental animal from human material there are many failures, and the mere fact that an animal has failed to succumb to the experimental disease does not even now mean that the virus was not present. In other words, the identification of the presence of the etiological agent is not so simple a matter as it is in diphtheria, scarlet fever, or erysipelas. However, in spite of the difficulties involved in obtaining a "take" in the experimental animal and the great and almost prohibitive expense involved in the experimental studies, we have made definite strides and accumulated a certain amount of experimental evidence to act at least as a basis for some of our present concepts of the disease, and in the following pages I shall attempt to outline briefly some of these concepts.

---

*Read before the Mid-South Post-Graduate Medical Assembly, Memphis, Tenn., February, 1938.

Concerning the etiologic agent - - - In answer to the commonly repeated question—"Have you isolated the germ of the disease?"—the answer is, "Yes." The virus of poliomyelitis has been as definitely isolated as any such infective agent has been isolated in any disease caused by a virus. We are as certain that we are working with this infective agent as we are with a bacterial agent, except that we cannot see it. We can produce the experimental disease and prove its presence in the experimental animal by pathological studies and by indefinite passage through monkeys. We can immunize normal animals with it and establish the presence of such immunity both by testing the serum for the presence of neutralizing substance and by the resistance of such animals to the intracerebral infection. We can destroy the virus by heat and chemicals and we can modify its infectivity by absorption on certain inert substances like kaolin and aluminum gel, or by neutralizing it in part or completely by the addition of varying amounts of convalescent or other immune serum.

The virus is recovered with the greatest regularity from the spinal cord of human beings and monkeys, during the height of the disease. It has also been recovered from the nasal mucosa and secretions of animals sick with the disease.

Recently Paul and Trask[5] and Kramer, Sobel, Grossman and Hoskwith[6], have similarly recovered the virus from the nasal passages of human beings suffering from the disease. This has been accomplished sufficiently often to indicate that the nose and throat harbor the virus and is a means of egress of the virus from the body. These results in the human being, added to the experimental data, have added strength and give assurance to our concept of the contagious nature of the disease which had previously been based on epidemiologic evidence alone.

It is interesting to note and serves to illustrate the paucity of the experimental data that until the recent publication by Trask and Kramer and their associates, the three weeks' quarantine period for cases of poliomyelitis was based on only about two previous observations of about 20 or more years ago: one by Dubois, Neal and Zingher[7], who recovered the virus about 18 days after the onset of the disease, and by Lucas and Osgood[8], who recovered it about 6 months after the acute attack.

The recent results of experiments by Paul and Trask and in our own laboratories on the survival of the virus in the nose and throat of patients ill with the disease, indicates that the virus may persist from one to three weeks. These figures coincide with the commonly accepted quarantine period generally in force throughout the world.

Flexner's early observations of the development of neutralizing substance in the blood serum of animals who had passed through an attack of the disease has given rise to a more or less practical, and in a broad sense a reliable, test for immunity to poliomyelitis. By the use of this socalled neutralization test, Aycock and Kramer[9] have studied the distribution of immunity to the disease in the normal population in the different age groups. Their studies included individuals living in rural as well as urban communities. They found that nine-tenths of urban adults were immune to the disease, and that the largest number of non-immunes occurred in children under five years of age. These figures coincide very closely to the age distribution of the disease. They also found that people living in rural communities were less likely to be immune, and that a rural adult was no more likely to be immune than a child of ten residing in the city. They found as extensive an immunity in urban adults living in the South as those living in the North[10]. As in diphtheria and other contagious diseases of childhood, they found that newborns were passively protected by maternal immunity for part of the first year of life[11].

The question arose concerning the source of this immunity. Was there some physiological bodily change or "maturation," as suggested by Jungeblut[12], or is this widespread immunity in the normal population the result of exposure to the virus of the disease? A similar question had previously arisen in the case of diphtheria, which was answered by Goldberger[13] and others who found a sufficient number of healthy carriers of the diphtheria bacillus in the normal population to account for its widespread dissemination in the growing population. Since the virus of poliomyelitis can neither be seen nor grown on artificial media, such surveys were not possible in the case of poliomyelitis.

Furthermore, poliomyelitis is a relatively rare disease offering too few opportunities for direct contact with patients to account for the widespread distribution of immunity in the normal population. The virus has, however, been recovered from the nasal passages of acute cases and from contacts, although this is a difficult and expensive procedure. In our laboratory in 1935[14], we were successful in recovering the virus from the tonsils and adenoids of a healthy child who had no history of contact with the disease and in a year when Brooklyn was relatively free from poliomyelitis. It was one of about 140 tonsils and adenoids examined. This suggests a possible carrier rate between one-half and one per cent; a figure which if substantiated would be sufficient to saturate the population over a period of 20 years. This and the other recoveries of the virus from contacts, has led a number of us to assume the presence of the existence of true carriers of the virus of poliomyelitis in the normal population. This assumption meagerly supported by direct evidence, serves to explain the widespread distribution of immunity in the normal population; an explanation that coincides with that accepted for the similarly widespread distribution of immunity to diphtheria.

In what ways has our accumulated information concerning the disease contributed towards its control by way of treatment or prevention? Netter[15] in 1911 in France was the first to employ convalescent serum in the treatment of the disease in the acute stages. He did this from analogy with other diseases rather than from exact information; but the reasonableness of this procedure was substantiated by the subsequently evolved information that the blood serums of convalescents possessed the power to neutralize the virus. In 1927, '28, '29, Aycock, Luther and Kramer[16], treated large numbers of patients in the preparalytic stage of the disease, and compared the results with similar numbers of patients who had not received serum. The results of their findings were so strikingly in favor of the serum treated cases, both from the number of patients paralyzed and the extent of paralysis, as well as from the case fatality rate, that the procedure was adopted. It was not until 1931 when Kramer, Aycock, Solomon, and Thenaby[17] modified the experimental conditions by treating alternate cases, and from a larger study carried on by the Academy of Medicine, under similar although not as well-controlled experimental conditions, that it became evident that the serum was actually of little or no value in the outcome of a case. About half the patients in our group recovered without any paralysis, irrespective of whether or not they received the serum; and the serum treated cases fared no better than those that failed to receive serum. Dr. William H. Park[18] and the Members of the Committee of the Academy of Medicine, arrived at the same conclusion of the apparent uselessness of convalescent serum in the treatment of the acute illness.

Our results are illustrated in the first three slides.

There are, on the other hand, those who still feel that convalescent serum is of value in this connection, notably, McNamara in Australia, some Canadian workers, and serum was used in the Chicago outbreak of poliomyelitis last year. The weight of the evidence however indicated that such serum, at least in the doses employed, is of little or no value.

It has long been suggested that H. C. S. may have prophylactic value similar to the prophylactic use of diphtheria anti-toxin. Our own experiences with immune serum, both human and monkey, as a prophylactic agent in the experimental disease, has been anything but reassuring. The time is too limited to give the details of all of our own experimental efforts in that direction. The following statements, however, briefly summarize the results of our many experiments with immune serum:

We have failed to protect our animals against intracerebral inoculation virus for even 24 hours after the administration of potent immune serum subcutaneously, intramuscularly or intravenously in huge doses. Furthermore, the infectivity of the cords of animals receiving large quantities of serum (10 to 30 c.c. per kilo body weight) during the incubation period of the disease, seemed unaffected.

We failed to detect the presence of neutralizing substance up to but not later than 12 hours after the serum was administered; and these findings occurred only when huge doses of serum were employed (75 to 100 c.c. of serum was administered to a 6 to 8 pound monkey.)

In spite of the many negative experimental results and only the uncertain clinical impressions, the general feeling and urge has been to employ such serum for human prophylaxis, and there have appeared in the literature the results of a number of such efforts to confer protection by the administration of parental blood or H. C. S. in epidemic areas. The analysis of the results of two such attempts may serve to emphasize the caution which must be exercised in evaluating such data.

It might be well at this point to consider some of the epidemiological and clinical features of the disease, so that we may have some notion of the conditions under which reliable information may be obtained. In the first place, poliomyelitis is a disease of low incidence, suggesting that many thousands of children must be inoculated and compared with an equal number of uninoculated children of the same age group, before the value of any prophylactic agent can be determined. In the second place, the outcome of contact with the virus is not predictable, that is, we have no way of telling at the outset whether or not an exposed child will escape the disease, nor in the event that the child contracts the disease, can we predict the degree of crippling. In the third place, although poliomyelitis is endemic in certain areas, the epidemic occurrence is unpredictable for any given area or district, so that we are seldom prepared to take advantage of a situation at the onset of an outbreak. Furthermore, the duration of an epidemic of poliomyelitis is seldom longer than two and a half to three months.

We are usually well past the first quarter or third of the outbreak before we realize that we are dealing with anything more than a sporadic occurrence of the disease in an endemic area. Unless by happy chance an adequate organization supplied with large quantities of previously prepared serum be present in the immediate location of the outbreak to carry on such an experiment in prophylaxis, from two to four weeks may be lost before the mechanics of the preparation for the experiment are under way. Since a certain interval of time is further necessary for the actual administration of the serum, at least one-half or more of the epidemic is over and the information resulting from such a study can only apply to the similar and waning portion of the outbreak.

The largest of such recorded attempts at prophylaxis was carried out by Stokes[19] and his co-workers in Philadelphia in the summer of 1932. Because of the close proximity of Philadelphia to New York, which had passed through an outbreak of the disease the previous year, the authorities of Philadelphia were on the alert and had collected and processed a large volume of C. S. The rapid and efficient organization of the unit and the splendid cooperation of the many health and other agencies, is a commendable example of a community health venture.

The first case of the disease was reported in July, but it was not until the middle of August that Philadelphia realized that it was in the midst of an outbreak second only to the severe outbreak of 1916. The peak of the outbreak was reached the fourth week in August. The largest active unit which was situated at the Children's Hospital in Philadelphia, began to function August 20th and continued to function for almost six weeks, or until the epidemic was essentially over. During this six-week interval, 1,341 children were injected at the Children's Hospital with 60 c.c. each of whole adult blood. Other hospitals in Philadelphia co-operated in the effort; these latter institutions employing about 20 c.c. of C. S. and 20 to 40 c.c. of adult serum or whole blood, making the total number of children injected 2,179. Six mild cases of the disease occurred among the 1,341 injected at the Children's Hospital; none was reported from the other hospitals. The incidence of this entire group of 2,179 children was therefore 1:363, the incidence for the rest of the city in children under 11 years of age was 1:555.

This data is illustrated in the accompanying slide. As can be seen by the time the serum clinic had gained impetus, the peak of the epidemic had been passed and by the time the administration of serum had been completed, the epidemic was essentially over. It must, furthermore, be recognized that unconscious and avoidable selection was constantly going on throughout the period of serum administration, since the children contracting the disease during this sex-week period were automatically placed in the control group. In spite of the selection, furthermore, it appears that the incidence of the disease in the control group was appreciably lower than that in the treated group. Although this can readily be explained by closer observation and probable detection of milder cases in the treated group, yet these figures cannot be interpreted as favoring the use of prophylactic serum. Stokes, Irving and Wohlman emphasize the mildness of the disease in the treated cases, and conclude that the prophylactic use of serum was justified. The smallness of the figures associated with the unpredictableness of the disease would lead one to question the validity of such a conclusion.

Another similar study on prophylactic value of adult serum took place in the town of Bradford, Pennsylvania. At the suggestion of Dr. Brebner[20] of Dr. Park's laboratory, the local health authorities in Bradford estabished a free clinic in which 10 to 20 c.c. of parental blood was administered to children intramuscularly.

The first case of poliomyelitis was reported on August 25th and the last case on October 17. The free clinic commenced operating on September 20, and functioned until October 1. Twelve hundred children were inoculated at the free clinic and about 100 more by private physicians. About 2,500 children of the same age group did not receive serum and constituted the control group. One mild case occurred in the immunized group, while 32 cases occurred in the control.

At first glance these figures seem impressive; however, a detailed analysis of the outbreak reveals these pertinent points. First, 19 cases or almost 60% of the total number reported during the outbreak had already been reported before September 20th when the free clinic commenced operating. Second, during the ten-day period that the serum was administered an additional nine cases were reported. These nine cases accounting for an added 27% of the total number of cases reported were naturally delegated to the control group. It is fairly evident therefore, that the best possible interpretation of the results of this experiment could only apply to less than half of the outbreak; the part of an outbreak that is generally recognized as being the milder or waning part. If, in addition, correction is made for the unconscious selection in the added 27% of the cases that occurred while the immunization was going on, the excellent results as indicated by the ratio of one case in the treated group versus 32 cases in the untreated group become more apparent than real.

In summarizing these two experimental attempts at human prophylaxis, it must be recognized that although these workers may have had a strong clinical impression that the administration of blood had aprophylactic value, an analysis of the details of these experiments reveals the fact that there is too little actual information available to justify any conclusion.

With this failure to establish convalescent serum as an agent to combat the disease, investigators turned their efforts in other directions in their continued attempts to control the disease. In 1933, 1934, and 35, three methods appeared in the literature and were recommended by the authors as possibe and perhaps practical methods for the control of the disease through active immunization.

Although any procedure involving active immunization as a general public health procedure would appear to be extravagant and wasteful in view of the relative rareness of the disease, yet in face of the extraordinary panic attending even the smallest outbreak of poliomyelitis, such suggestions of control have definite merit. However, it must be remembered that any method of active immunization must possess at least two virtues. In the first place, the vaccine must be safe, for in the face of a disease whose epidemic incidence seldom exceeds one or two per thousand population even an occasional accident in the course of vaccination is likely to exceed the normal incidence of the disease, thus vitiating the desired results. In the second place, the vaccine must be effective.

In 1933 Kramer and Rule published similar claims for a vaccine made of active virus, to which sodium ricinoleate was added. These authors believed that sodium ricinoleate served to reduce the infectivity of the virus. After trial in a small number of volunteers, without accident, these authors recommended this vaccine for general human application.

A third vaccine was recommended by Brodie in 1935[23]. His vaccine consisted of active virus rendered non-infective by the addition of one-tenth per cent formalin.

The Brodie vaccine was extensively publicized and was subjected to widespread clinical trial in different parts of the country, under more or less controlled conditions. Kolmer's vaccine received similar widespread publicity and was likewise subjected to clinical trial, with little or no supervision. You are all doubtless familiar with the outcome of these clinical trials. Both of these methods failed in their objective—both failed to fulfill the two cardinal requirements for a vaccine for poliomyelitis, namely: safety and efficacy.

The vaccine recommended by Kramer and Schaeffer remained in the experimental stage and did not receive clinical trial.

In 1935 we carried out a comparative study of these three vaccines[24, 25] adding a fourth vaccine, which in our hands has yielded a high degree of immunity in a large proportion of animals[26] as a control. This vaccine is prepared by absorbing active potent virus on aluminum hydroxide gel. Results of these comparative studies on animals is summarized in the following two slides:

The immunity in vaccinated animals was determined in two ways—the first consisted of testing the serum of animals (obtained about one month after the last dose of vaccine) for the presence of neutralizing substance. The second and more rigorous test was the intracerebral test, which consists of intracerebral inoculation of an adequate dose of virus.

As can be seen from the first slide giving results of the neutralization test, only 13 to 18 per cent of animals inoculated with the equivalent of ½ gram or 1 gram of the Brodie vaccine (the dose recommended by him) developed detectable amounts of neutralizing substance; more than one-half of the animals inoculated with the Kolmer vaccine gave evidence of having developed neutralizing substance. 20 to 4 per cent (depending upon the dosage of vaccine) of animals inoculated with a neutralized mixture of virus and immune serum, and from 80 to 87 per cent of animals inoculated with virus absorbed on $Al(OH)_3$ had detectable amounts of neutralizing substance.

The results of the intracerebral tests are summarized in the next slide. As can be seen from this slide, the vaccine when used in the manner and dosage recommended by Brodie, namely: the equivalent of ½ gram virus, failed to protect any of the animals. When twice the dose of vaccine was used (or the equivalent of 1 gram virus), about one-third of the animals resisted intracerebral inoculation. Only about 7 per cent of the animals vaccinated with the Kolmer material resisted intracerebral inoculation.

More favorable results were obtained when the equivalent of from 1½ to 2 grams virus of the neutralized serum-virus mixture was employed. From 37 to 82 per cent of the animals resisted intracerebral inoculation, and these results compared favorably with the vaccine prepared by absorbing virus on $Al(OH)_3$. From the results of this comparative study, Kramer and Schaeffer continue to offer neutralized mixtures of virus and serum as a safe and possibly effective means for human immunization.

In the third slide is given the results of a group of non-immune children vaccinated with Brodie material and compared with a group of non-immune children of the same age and locality who had not received the vaccine. The essentially identical results as shown by the presence of neutralizing substance in the unvaccinated and vaccinated groups from one to three months after vaccination, suggests that the development of immunity in these children was probably not associated with the administration of the vaccine. It rather suggests that this immunity was the result of the natural immunization of the population.

There has appeared in literature during the past two years a number of publications dealing with the prevention of intranasal infection in the monkey, with the virus of poliomyelitis by the application of certain chemicals to the nasal mucous membrane[27].

All published procedures are based upon the generally accepted concept that the virus of poliomyelitis normally enters the body by way of the olfactory portion of the nasal mucous membrane. Although the exact mechanism involved is not clearly understood, it is believed that these chemicals serve to render the mucous membrane impervious to the passage of the virus.

Two such suggestions have received some prominence, the first by Armstrong[27a] from the laboratory of the United States Public Health Service. This worker devised a mixture consisting of a solution of ½ per cent picric acid and ½ per cent solution alum in normal saline, which he found effective in preventing the disease in the experimental animal. Because of the relative harmlessness of these chemicals Armstrong suggested that the mixture be given clinical trial. This was done in an epidemic area in Alabama (Birmingham and Jefferson County[28]). Every attempt was made to organize the experiment so that a maximum of accurate information would be made available. Full hearted co-operation was given by the majority of local physicians, by local health authorities and by the newspapers. At medical meetings the experimental basis and the aims of this venture were explained to the doctors. The co-operation of the lay public was urged both by medical authorities and the press. It was recommended that the chemicals be applied either by a doctor or under the immediate supervision of a doctor, and the details of application were explained.

On July 15, 1936, open air clinics were established to which the lay public was invited to come for treatment or to act as controls in the event they did not choose to receive treatment. Similar attempts at organized treatment were made in Tennessee and Mississippi.

Although the great mass of physicians were completely co-operative, it soon became evident that a large bulk of the lay public had become uninvited and untrained experimenters. The results published by Armstrong, however, dealt with those groups of treated and untreated individuals in specified areas of Birmingham and Jefferson County. Between July 15 and August 22 a total of 3,545 or 69 per cent of white volunteers, and 1,465 or 48.9 per cent of colored volunteers, received chemical sprays. The total number of cases in the sprayed white group was 14. The theoretical number of cases in the sprayed white group, based upon the occurrence of cases in the control group, was 16.8 suggesting that 2 or 3 cases may have been spared infection by the intranasal application of picric acid-sodium alum. Almost identical actual and theoretical results were obtained in the colored group. I might best summarize this experiment by quoting from Armstrong's discussion. "The development of poliomyelitis among persons sprayed according to instructions, suggests that either the chemicals were not effective for man or the advised method of application which Dr. Peet and Schultz have shown effective for monkeys, was not, as practiced, trustworthy for man. It is therefore obvious that further experimental work directed toward the finding of a more dependable method of application and of a more ideal solution be continued."

Another method has more recently been suggested as a nasal barrier by Schultz and Gebhardt[27b]. This method consists of the application of ½ or 1 per cent zinc sulphate to the olfactory portion of the nasal mucous membrane. From an experimental point of view this chemical appears to establish an effective barrier to intranasl infection in most treated animals. After preliminary instillations of this solution into the nostrils of monkeys for 5 successive days most of the animals resist infection by the intranasal route for a period of one month, after which they are again susceptible.

Although this procedure has enjoyed some human trial, there have been no detailed published reports of such efforts. It is hoped that this chemical offers only temporary protection that it will be as effective in human beings as it is in the experimental animal. The application of zinc sulphate unfortunately gives rise to a number of annoying symptoms such as severe headache and vomiting and a more or less prolonged anosmia and is sharply resisted by children. Shuld it, in spite of these drawbacks, prove effective in preventing infection in the human being, it will be a valuable contribution to control, at least, in times of an outbreak.

It must, of course, be recognized that the establishment of a chemical blockade to the entrance of the virus, is to be regarded as a measure of temporary control. Such procedures do not appear to alter the underlying susceptibility of the animals to the diseases. A somewhat loose analogy would be the usefulness of the diphtheria anti-toxin in the prevention of diphtheria. Furthermore, should these, or similar substances, prove effective in preventing infection in human beings, their employment year after year might result in the postponement of the age of exposure and disease, and thus tend to accumulate a large number of susceptibles in the normal population. The wisdom of accumulating such susceptibles might seriously be questioned both from an epidemiologic and an economic point of view.

It is our opinion that a more fundamental approach to the control of poliomyelitis rests in a better understanding of the nature of the underlying factors that determine susceptibility to the disease. What these factors are is not definitely known. Draper's[29] studies have suggested physiologic factors. Aycock[30] has suggested an inheritance factor.

During the past year in the laboratories of the Infantile Paralysis Commission of the Long Island College of Medicine we have apparently succeeded in altering the susceptibility of Macacus Thesus to intranasal instillations of potent virus with the subsequent development of immunity[31]. The procedure consists of instilling a mixture of adrenalin and ephedrine in combination with surgical pituitrin into the nostrils of animals. $\frac{1}{2}$ to $\frac{3}{4}$ of the treated animals have not only resisted intranasal infection with potent virus but most of them have, after prolonged treatment with these substances in combination with virus, developed an active immunity as indicated by the appearance of neutralizing substance in their blood and by their resistance to intracerebral infection.

These experimental results are summarized in the following slide:

It appears from these experiments that we have altered the uniform susceptibility of the monkey to intranasal infection, so that these animals now react like human beings.

We have no knowledge of the mechanism by means of which pituitrin S and Adrephine produce this apparent alteration in susceptibilty, but since the outcome of continued exposure to virus in most animals treated with these substances results in immunity, we believe this offers not alone a better approach to an understanding of the disease, but also perhaps towards the control of poliomyelitis.

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The Management of Acute Empyema by the Closed Method of Drainage*

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IT IS A curious thing that the treatment of empyema by drainage is one of the oldest surgical procedures of which we have knowledge, and that the teachings of Hippocrates concerning methods of drainage still continue eminently correct. He laid down three principles: that operation should not be performed early in the disease; that rapid evacuation of pus from the chest is almost invariably fatal; and that the wound must be kept open until infection has subsided. It would be well for all of us in our management of empyema to bear those requirements in mind. Indeed, as one group of writers recently expressed it, deaths would be fewer and chronicity markdly decreased if we forgot a great deal that has been written on the subject of empyema and returned to those first principles.

Certain facts about empyema may profitably be recalled before we take up the question of a special method of treatment. Acute empyema, which is also known as purulent pleurisy or pyothorax, is a collection of purulent fluid in the pleural cavity or interlobar spaces. It is merely the reaction of the pleura to the presence of infection and is not a primary condition. Most often it is secondary to pneumonia, lobar pneumonia in adults and bronchopneumonia in children, and in the great majority of cases the pre-existing disease can be clearly demonstrated, though occasionally it cannot be. In a small percentage of cases it follows influenza. It may also follow such conditions as penetrating wounds of the chest, suppuration of the mediastinal glands, and rupture of a long abscess, or it may develop by direct extension from a liver abscess.

Speaking generally, the pneumococcus is the causative organism in 60 to 70 per cent of all cases, the streptococcus in 20 to 30 per cent, and the staphylococcus in 3 per cent. In 15 per cent of the cases the infection is a mixed one, and in about 5 per cent it is impossible, even by culture, to demonstrate the organism.

A prompt diagnosis of empyema is a most important consideration in the management of any case. This diagnosis should always be considered whenever there is a delayed convalescence following pneumonia or empyema, and whenever there is a recurrence or persistence of fever, specially when signs of sepsis are present also. Under such circumstances there should be repeated endeavors to identify localized or general collections of fluid in the chest. Repeated blood counts should be done, repeated x-rays should be made and carefully studied, and repeated aspiration should be done. If such precautions are observed in every case, the number of missed diagnoses will promptly and definitely fall.

The other considerations in acute empyema can profitably be listed in outline form. In the first place, the desiderata of treatment may be listed as:

1. Reduction of the mortality to the lowest possible level.
2. Reduction of the convalescence to the briefest possible period, during which time the patient shall be kept in the greatest possible comfort.
3. Prevention of chronic empyema, and of other possible complications.
4. Restoration of the normal functional capacity of the lung.

In addition to chronic empyema, the other possible complications of acute empyema may be listed as:

1. Pneumonia.
2. The persistence of undrained pus pockets or the development of new pus pockets.
3. Bronchial fistulae.
4. Pulmonary edema.
5. Empyema of the opposite side.

The chief causes of chronic empyema may be listed as:

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*Read before the South Mississippi Medical Society in Hattiesburg, Miss., December 9, 1937.

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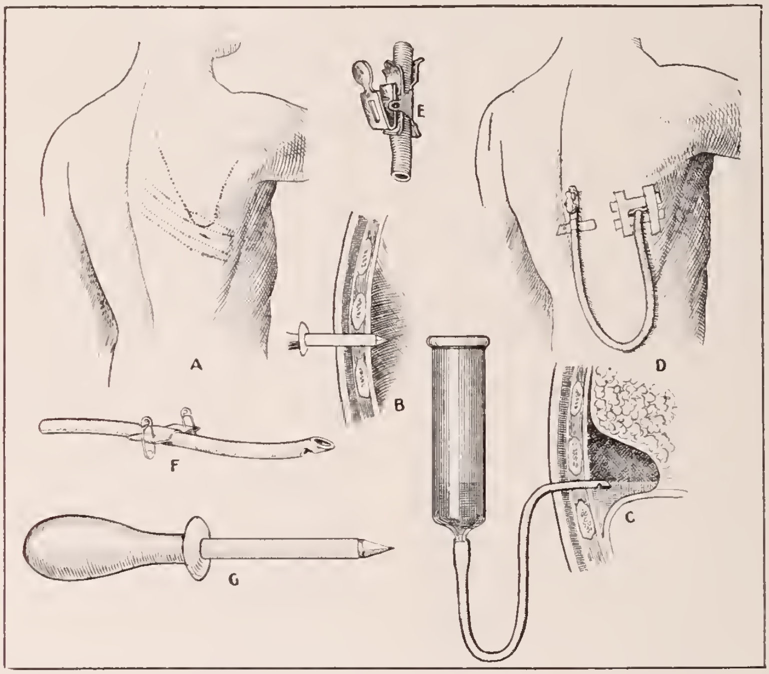
1. The presence of tuberculosis.
2. Delay in instituting drainage.
3. Failure to establish drainage in the proper location.
4. Failure to create an adequate opening for the establishment of drainage.
5. The presence of necrotic ribs or of other foreign bodies.
6. The development of multiple pus pockets or of lateral branch sinuses.
7. The development of small abscesses in the pleura.
8. The development of pulmonary bronchial fistulae.



A. The location of the pus has been determined by aspiration, local analgesia has been injected, and the incision has been made through which the trocar and cannula are to be inserted into the pleural cavity.
B. Trocar and cannula in the pleural cavity.
C. The catheter has been inserted through the cannula into the pleural cavity and is resting in the most dependent portion thereof. The syringe is attached to the catheter.
D. After the aspiration has been completed, the catheter is fixed to the chest wall with four pieces of adhesive tape; a small sponge is used as a dressing on the chest wall.
E. Type of clamp used to close catheter.
F. Method of fixation of catheter to chest wall by adhesive tape and safety pins.
G. Type of trocar and cannula used.

It will be clear from what we have said concerning the desiderata of treatment, the possible complications, and the problem of chronic empyema that the crux of the therapy of empyema depends upon adequate drainage of the infected pleural exudate. Again in outline form let us list the methods by which drainage may be established:

1. Simple aspiration, with or without the injection of dyes.
2. Aspiration and air replacement.
3. Simple rib resection, with or without subsequent irrigation of the cavity.
4. Intercostal drainage by the suction apparatus, with or without subsequent irrigation of the cavity.
5. Closed drainage.

It is obvious that in the management of empyema, indications exist at one time or another for the employment of all of these various methods of treatment, and perhaps of more than one method in some cases. On the other hand, it is equally obvious that surgeons who see large numbers of cases in this, as in other conditions, will lean more and more to a single method of treatment and will be inclined to employ it in their personal cases unless definite contraindications exist. That has been my experience as well as the experience of other surgeons with whose practice I am familiar. In my own hands the closed method of drainage has been simple, safe, and entirely satisfactory, and as the years have gone by I have tended more and more to use it to the exclusion of all other methods. I first became acquainted with it during my association with the late Dr. C. A. Hedblom, and the technique which I am describing here is basically the one which he devised but to which a number of modifications have been added. The procedure is as follows:

The area in which pus is present is determined, as usual, by aspiration, and is surgically prepared. Then, under local analgesia, a small incision is made (Fig. A) and a No. 22 catheter is inserted through an ordinary bladder trocar and cannula (Fig. G) and is fastened in place (Fig. B). A syringe (60 or 120 c.c.) is fastened to the catheter (Fig. C) and 200 to 300 c.c. of pus is drawn off; in children the amount of pus withdrawn is correspondingly smaller. At this point the tube is clamped (Fig. E) and the piston of the syringe is removed. A slightly smaller amount of saline solution than the amount of pus withdrawn is poured into the barrel of the syringe, whence by gravity it passes into the cavity in the chest. The same amount of pus and saline solution is now syphoned off, a syringeful first being re-injected several times to bring about a complete mixture of the pus and the saline solution. The syphoning process is repeated until the fluid returns fairly clear, after which the catheter is clamped off and is fixed to the chest wall with adhesive tape (Fig. D).

Aspiration by this method is done every two hours during the day, and once or twice at night during the period of extreme toxicity and while the cavity is large. As conditions improve, the night irrigations may be discontinued, but their continuation shortens the period of convalescence and they disturb the patient so little, sometimes not even wakening him, that their use is advised whenever this is possible.

After the first two or three irrigations, if there is no evidence of the presence of a bronchial fistula, the saline solution is replaced by a solution of chlorinated soda. It is a wise precaution to use methylene blue or some similar coloring agent in the saline solution, so that, if a fistula does exist, its presence may be recognized by the colored sputum which the patient coughs up. Under such circumstances only saline solution may be used, or weak, non-irritating antiseptic solutions.

One or two other precautions may be mentioned. As we have said, in infants and children smaller amounts of pus are withdrawn, and, naturally, a smaller catheter is used. If these precautions are observed, I have personally never seen any appreciable variation in the intrathoracic pressure. If, as sometimes happens, fibrin plugs the catheter during the first few irrigations, the introduction of an equal volume of surgical solution of chlorinated soda will end the difficulty by softening and dissolving the fibrin.

Irrigations are continued as described until the size of the cavity—by measurement and not by impression—is less than one-ounce capacity. At this stage the catheter is removed and is replaced by a soft black rubber tube, which is held in place by safety pins. The cavity is irrigated once a day through this tube, which is gradually and cautiously shortened, so that the cavity heals from below outward. Convalescence from this point onward is usually without incident. If, however, the cavity seems to remain stationary in capacity after the catheter has been replaced by the tube, it may eventually be necessary to resort to the open operation, completely unroofing the cavity by the surgical removal of short fragments of one to three ribs, together with the thickened pleura, after which the wound is permitted to heal.

Hedblom's own discussion of the advantages of closed drainage by this technique may be quoted at this point. He wrote, in substance: This simple method accomplishes many things at the same time. The cavity is kept emptied of pus, its walls are washed mechanically clean, fibrin and necrotic material are dissolved, and, if a surgical solution of chlorinated soda or of other bacterial solutions is used, the surfaces are at least partly sterilized. The lung is kept partly expanded. The tube remains practically air-tight for a period of three weeks or more, and thus the degree of expansion of the lung is controlled by the amount of fluid left in the cavity at each irrigation. Pocketing of the pus is prevented if the cavity is filled to capacity once a day, by a few centimeters of gravity pressure, and this is an important precaution to observe, especially during the first week, when one is dealing with very large cavities. Later this same procedure may be used to measure the progressive obliteration of the cavity. After the first few irrigations, the whole procedure may be entrusted to a nurse or to a reliable member of the family. There is one other simple but important precaution: never inject the solution, but always use gravity in filling the cavity, and discontinue the irrigation if the patient coughs more than usual or complains of tasting the solution, or if the returned solution shows blood streaks. If these simple precautions are observed, untoward results from bronchial irritation, "pleural reflex," air embolus or sudden collapse are almost entirely eliminated or at least are reduced to a minimum.

My personal experience shows, as I have said, that closed drainage alone will suffice to bring about a cure in the great majority of cases of acute empyema. But the method is adequate only if the greatest care is taken in its employment; every detail must be watched and must be carried out exactly as has been described. With increasing use of this technique I have become increasingly sure that it provides a simple, safe and effective means of handling acute empyema.

In the few cases in which the method is not entirely successful, it still has very obvious advantages, in that it carries the patient through the acute and dangerous stage of his illness without adding the strain of surgery to the burden he is already called upon to endure. Then, if surgery should become necessary, it can be done when his condition is so much improved that the small open operation does not introduce the risk which it always introduces in the earlier, more acute period.

I might say, in conclusion, that it is my own custom, and a custom which I strongly advise others to follow, to caution the patient and his family in the beginning that a surgical procedure may be necessary at the end. They are thus prepared for what may eventually be required, and are usually entirely willing to defer surgery in the hope and expectation that it may never be necessary, as it never is in the great majority of cases.

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Congenital Absence of Uterus and Vagina and Associated Ectopic Horseshoe Kidney*

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RECENTLY Dannreuther[1] listed in table form four types of operations for this kind of abnormality and discussed the advantages and disadvantages of each. The operations he gave consideration to are, namely, Baldwin, Popow-Schubert, Graves and the Frank-Geist types. It will be the purpose of this paper to add to this list another type of operation for the same deformity. The operation referred to is that described by Wharton of Baltimore before the Southern Surgical Association in Birmingham, December, 1937.

According to Salatich[2], de Hean is credited with performing the first operation procedure on the recto-vesical septum for congenital absence of the vagina on January 25, 1761, while Douglass[3] recognizes Dupuytren as the first to make an artificial vagina in 1817. Heppner used skin flaps from the labia to line the artificial cavity as early as 1872, but the operation was not considered successful. Beck[4] in this country in 1900 devised a skin flap type of operation by making an opening above the symphysis and dissecting down around the bladder to the perineum. Through this opening he sutured in skin flaps drawn from below and then closed the wound above the symphysis. Baldwin[5] in 1904 described the method of intestinal transplantation and in 1907[6] performed the actual operation on a patient whose introitus sloughed following a forceps delivery. Schubert in Germany, according to Dannreuther[1], in 1911 began to popularize the use of a portion of the rectum in correcting this deformity. Sneguireff had done this type of operation in Paris in 1892 and Popow in Russia utilized a portion of the rectum on a patient so afflicted in 1910. Graves[7] in 1916 published in his text book a technic, using four skin flaps from the labia and thighs. The flaps are sutured over a cup like a pocket turned wrong side out, and then anchored by sutures to the base of the cavity. This operation, although considered a safe procedure when compared with the intestinal transplantation method of Baldwin, is becoming less popular in favor of the Frank-Geist "satchel handle" operation. Frank and Geist[8] described their tubular flap operation in 1927, which is done in stages to preserve the blood supply until the graft has taken in its new location.

The ideal operation for a deformity of this kind is one in which the artificial cavity is lined with a mucous membrane and since the vagina is purely a coital organ, it is sometimes questionable whether a patient should be subjected to surgery that carries a mortality as high as the intestinal transplantation method. The Wharton operation constructs a cavity lined with mucous membrane and carries a mortality approximately nil. Loeb[9] in 1920 in his experiments on wound healing showed that epithelial cells in response to wound stimulus possessed ameboid cell movements and that whole rows of cells would move from the old epithelium toward the center of the defect until the wound is closed. Loeb's work explains the principle upon which this operation is based, namely, that epithelium will

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[*] Read before the Jefferson County Medical Society, May 2, 1938.

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cover a raw surface if given the proper chance. The natural variety of epithelium lines the artificial cavity when this technic is used as the vestibule and medial surfaces of the labia minora are covered with mucous membrane.

Case Report

W. M., a white female, age 18 years. Chief complaint: Amenorrhea. She states she had never menstruated, but had been treated two years ago with injection to no avail. When her menses failed to appear after adequate treatment by injection an examination was made by her local physician, September, 1936, who at that time thought she had an imperforate hymen. He found at operation an absence of vagina and uterus. A dissection was made between the bladder and rectum, but the parts became adherent as soon as the pack was removed. She states that she enjoyed good health except for occasional lower abdominal pain which occurred without any particular periodicity. This did not, however, prevent her taking part in all of the school activities her classmates enjoyed. She got along fine until November, 1937, when she fell in love and wanted to get married. It was at this time she was referred for operation. Nothing was noted in past history except usual childhood diseases. Her breasts enlarged and pubic hair appeared at thirteen years of age.

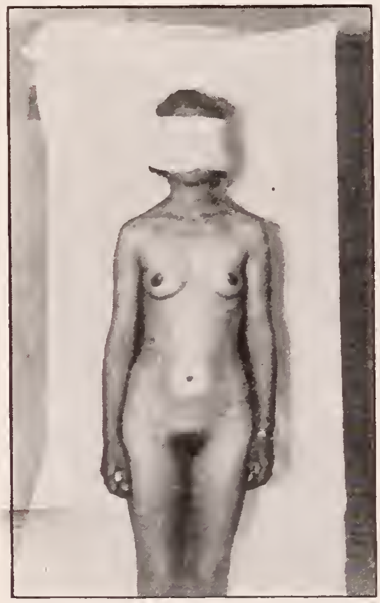

Fig. 1. Note the female habitus, well developed breast, and triangular distribution of pubic hair.

Family History: Father and mother living and well. Ages 49 and 48 respectively. Two brothers living and well. Three sisters living, oldest 21, married and has been menstruating regularly since age of 15. Youngest sister, age 14, has been menstruating normally for one year. Youngest sister, age 4, has never been examined. Patient has never known of any female deformity in any of her aunts on either side of the family.

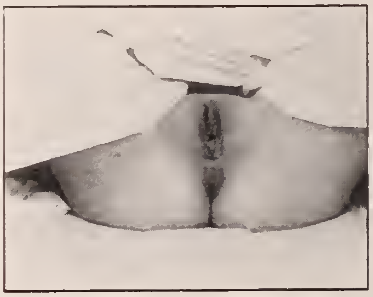

Fig. 2. Note well formed external genetalia. The vestibule is 1 cm. deep.

Social History: Intelligent, good habits, and a college freshman.

Physical Examination: The patient is well developed, well nourished and possesses definite feminine characteristics. The hair is fine and skin is soft. The breasts are well developed, nipples erect, glands of Montgomery are present, also female curvature of buttox and thighs. Patient has triangular distribution of pubic hair with apex pointing toward symphysis. No masses or herniations were palpated in abdominal or inguinale regions. Examination of external genitalia reveals normally formed labia majora and minora. The clitoris

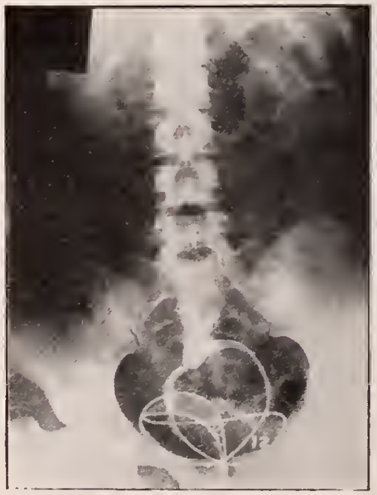

Fig. 3. Retrograde pyelogram of ectopic horseshoe kidney.

is present and responds to stimuli. The vestibule is 1 cm. deep and there is evidence of scarring. The urethra is normal in location and size. On rectal examination a mass could be felt in the right upper pelvis. This mass appeared to be about the size of a lemon. No structure could be palpated in the location of the uterus. Proctoscopic examination made by Dr. Gaston revealed a normal anus and rectum and an absence of pelvic organs except for mass in upper right pelvis.

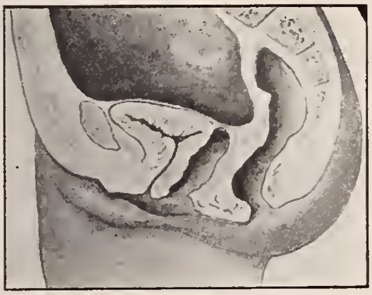
Fig. 4. Artificial cavity created between bladder and rectum. (Bickham's Operative Surgery).

Laboratory: Blood picture: 5,660,000, R.B.C. Hb. 94%, 6,900 W. B. C., Bleeding time and coagulation time, 4 minutes each, sedimentation time, over two hours, and blood Wassermann was negative. Urinalysis essentially negative and P. S. P. last hour 60%, 2nd hour 20%. Dr. Collins cystoscoped patient and reported ureters to be 10 cm. in length, the kidneys to be located in pelvis and to have two separate pelves, while Drs. Meadows and Kesmodel, radiologist, who studied retrograde pyelograms, were of the opinion that patient had one kidney with a common pelvis. No bony deformity was noted.

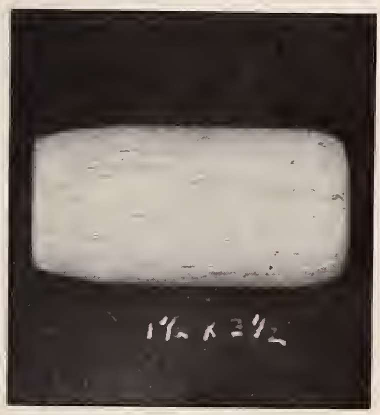

Fig. 5. Balsam wood prosthesis, 1½ inches by 3½ inches.

Procedure: On Dec. 9, 1937, the patient was anesthetized with gas anesthesia and placed in lithotomy position. By means of blunt dissection a cavity was created between the bladder and rectum 3½ inches in length and 1½ inches in diameter covered with two tightly stretched condoms was now ready to insert. At this point the technic varies from that of Wharton. Realizing that the success of the operation depended upon the epithelium growing down around the balsam wood form, I felt that if some "seedings" were placed in the bottom of the cavity to grow out and meet the epithelium growing in, the convalescence would be shortened. With this in mind five pinch grafts about the size of a dime were taken from the medial surfaces of

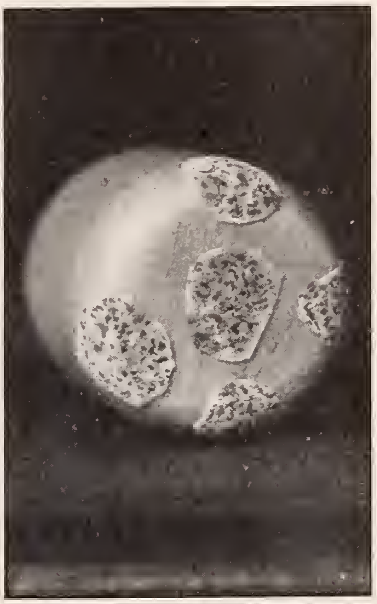
Fig. 6. Prosthesis covered with condoms. The dotted adhesive plaster represents the epithelial "seedings" of mucous membrane type obtained from medial surfaces of labia minora.

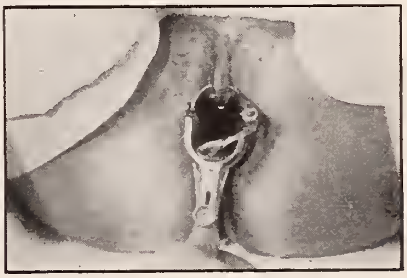
Fig. 7. This picture was made twenty-two days post-operatively, showing newly formed vagina to be of normal size.

the labia minora and placed on the head of the prosthesis with raw surfaces out. The instrument was placed in the newly formed cavity and fastened in place with an X shaped halter. Patient had an uneventful recovery and only required one catherization post operatively. First bowel movement occurred on the fourth day without pain. Urinary antiseptics were administered in anticipation of a pyelocystitis, because of the constant sounding of bladder during operation, however, patient's highest temperature was 100.5 degrees F. The patient was discharged from hospital on ninth post operative day and balsam wood form removed on 22nd day. The cavity was found to be lined nicely with a pale bluish membrane. There was no evidence of secondary infection and only a few small raw areas were noted. The patient was seen at this time by Drs. Collins, Kesmodel, McQuiddy, Timberlake and Armour, who were impressed with the rapid and substantial vaginalization of the cavity. The canal would admit two fingers easily and cause no pain when its walls were palpated. A biopsy was taken and studied by Dr. Graham, who stated that stratified squamous epithelium of the mucous membrane variety was growing nicely. The balsam wood was replaced and patient went home. She was advised about the use of prosthesis and to return in two months. The patient married Feb. 26, 1938 without returning for check up. A letter from her and her husband, dated March 28, 1938, one month after they were married stated, that they were both very happy. To quote, "My relations with my husband are very satisfactory (thanks to you). I have not been to see my doctor as I live quite a distance from him and I don't feel that it is at all necessary."

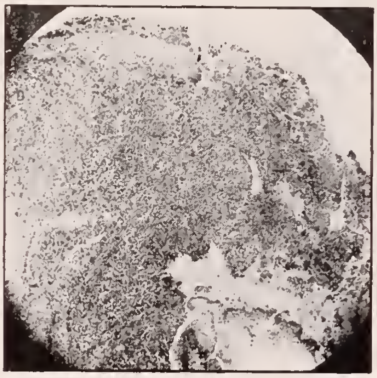

Fig. 8. Section of regenerating epithelial surface of vagina obtained twenty-two days after operation. At right is an older and at left a younger stratified squamous epithelium of the mucous membrane type. A thin layer of young epithelium is seen as an arc covering the granulation tissue in upper middle section of the field. (Photomicrograph 75x and reading by Graham.)

Conclusion: The different types of operative procedures have been reviewed and a new technic described in detail. The importance of investigating the genito-urinary system when an abnormality is found in the female organs is emphasized. All patients who have complete absence of menstrual molimena past the age of puberty should be examined. Operation is best delayed until marriage is contemplated. The Wharton type of operation is advocated and the modification offered because of the (1) short period of hospitalization, (2) one stage operation, (3) preservation of vulva, (4) mucous membrane lining of vaginal canal, (5) no irritating discharge, (6) negligible mortality, and (7) because in cases where the kidney is located in the pelvis the Baldwin operation could not be used.

Letter from patient dated August 6th, 1938 states, "My sex life with my husband is still satisfactory, and pleasant. I have not noticed any pain anywhere, and have not been sick since my opertion."

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Poliomyelitis—A Review*

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WHILE the syndrome of poliomyelitis is more or less familiar to us, its increasing prevalence emphasizes the importance of a detailed familiarity with its characteristics and behavior. Generally speaking poliomyelitis may be defined as a generalized systematic infection due to a virus, which shows an affinity or predilection for neurogenic tissue, producing pathological changes, frequently resulting in flaccid paralysis. Scientific literature has designated the clinical complex as epidemic or acute infantile paralysis, acute wasting paralysis and Heine-Medin's disease. Much confusion would be deleted by eliminating congenital terms accentuating the paralytic stage occurring late in the clinical course. Underwood[1] of London, described the disease very clearly in an article appearing in "Treatment of the Diseases of Children", in 1799, even before Heine was born. Since the encephalon may be involved separately or in conjunction with the cord, or the reverse order being true, an anatomic term must include both primary states, which makes it unwieldy and begets a certain confusion. Landray's paralysis usually, tho not always, is a rapid ascending form of poliomyelitis[2] which frequently carries a familial tendency, or may be associated with rabies or the injection of certain forms of vaccine[3]. Acute aseptic or serous meningitis very closely mimics the non-paralytic forms with the virus unidentified[4]. The Egyptian mummies of 3,700 B. C. carry definite evidence of acute poliomyelitis in epidemic form[5], while the skeletons of vikings buried 1,000 A.D., in Greenland, demonstrate the age and widespread distribution of the disease[6].

The frequency of the disease is hard to determine but those more familiar with its widespread distribution are willing to state, that as 1 per 1,000 children will probably have paralytic manifestations of the disease at some time during adolescence. During the epidemic waves, which occur irregularly, it is not uncommon to find an incident of 1 to 500[7]. If cases of the nonparalytic and suspected abortive types are included, the incidence may reach the alarming frequency of 1 to 10 of all children[8]. For the past ten years an annual average of 7,000[9] cases of poliomyelitis has been reported for the United States, in contrast to 28,000 cases of small pox, while 40% of the crippling is said to be due to poliomyelitis, as compared to 30% caused by tuberculosis[10].

Geographic topography carries only slight influence on the incidence of the disease. It is more prevalent in rural communities than in cities[11]. In the past, the incidence in the Southern states has been approximately one-third that of the New England states, but within the last decade the Southern states have noted a distinct increased incidence[12]. Epidemics of the disease are not frequent in warm climates or the tropics, and the paralytic forms become less frequent as the tropics are approached, but paradoxically, the frequency of the paralytic stage is highest during the summer months, reaching its peak in late August and early September[13]. There are some suggestive indications that the nonparalytic immunizing forms of the disease may be more frequent during the winter[14]. The greatest incidence occurs in children between the ages of 2 and 6 years[15], but is becoming more frequent among those slightly older. Healthy, growing boys fall victims to the disease more frequently than girls, or those finding it necessary to be on the alert for good health[16]. Negroes show a low incidence while Indians carry the highest per cent. Susceptibility may seem to run in families[17], and since the urine of pregnant women, placental extracts and epinephrine, neutralize the poliomyelitis virus, it has been hypothesized, that susceptibility to the disease may hinge on endocrine imbalance. Blood groups appear to have a relationship to incidence, since there are very few cases in groups A and B, while the titer of the neutralizing power of the serum of convalescent patients and normal adults is lowest for those in group O[18]. During epidemics, it is more than suggestive that illness among horses, dogs and chickens increases, with a high incidence of paralysis among chickens[19]. Scientifically speaking, however, the pathogenicity of the virus of poliomyelitis seems to be restricted to man and certain monkeys; chimpanzees, great apes and orang-outangs not being as scientifically studied[20]. The proof is conclusive that the infectious agent of poliomyelitis is a virus[21], which can be determined by innoculation of monkeys, since antibodies to it can be demonstrated in the serum, stools and urine of those suffering from the disease, either man or animal[22].

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*Read before the Pulaski County Medical Society, April 4, 1938 at Little Rock, Ark.

In the acute stage, the pathologic process shows an involvment of the reticulo-endothelial system, the thymus is conjested, and there is acute follicular necrosis of the germinal centers of the spleen and intestinal lymphoid structures. The tonsils are often enlarged, hyperplastic and congested. The most distinctive degenerative lesions of the disease are most commonly seen in the ganglion cells of the lower motor neurons of the interior horn in the cervical and lumbar enlargements of the spinal cord[33]. The axones show demyelinization and should the axis-cyclinder be destroyed, paralysis will be permanent. Capillary hemorrhages and interstitial cellular infiltrations occur about the blood vessels. The neurotropic virus enters thru the olfactory mucosa and cribriform plate and continues along the nerves from the upper olfactory centers to the basal ganglion, down the cord to the anterior horns, where most marked degeneration occurs with resulting paralysis.

The symptomatology is protean throughout the first and second stages, making a diagnosis somewhat problematic until the paralytic phase becomes evident. This assures the accuracy of a diagnosis but sacrifices much in instituting proper therapy. A simple, accurate and early test would go far toward defeating the sad outcome of many cases. Fortunately or unfortunately, most of the patients who have only mild fever, headache, congested pharynx, without rigidity of the spine and disturbed reflexes, will not submit to diagnostic lumbar puncture. Should paralysis fail to develop to establish the diagnosis, the most reliable conclusion is an abortive attack, which may have been correct or erroneous. The percentage of patients with poliomyelitis in whom the injury has not been sufficient to produce paralysis is not known, but estimates of from 10 to 86% have been made[23]. The incubation period usually runs from 6 to 20 days (average one week), when the paralytic stage follows a latent period of 4 or more days.

During the prodromal or systemic stage the following clinical symptoms are usually encountered; mild fever, 100 to 102, headache, drowsiness, irritability, rigors, sweating, anxiety, hyperesthesia, vomiting, diarrhea or constipation, coryza, sore throat and cough. The second stage or period of invasion follows the first with a latent period varying from hours to several days. During this stage the process is spreading from the thalamus through the spinothalmic tract to the posterior horns of the cord and posterior root ganglions. The associated symptoms and signs may find expression as localized pain and tenderness, stiff neck, rigid spine, a positive Kernig, Brudzinsky or Oppenheim sign, convulsions, delirium and increased tendon reflexes[24]. After a second latent period varying from 1 to 10 days the third stage or lower motor involvement may begin. The clinical symptoms will be expressed as tremors, twitching, ataxia, diminished electric reactions, anesthesia, incontinence of bladder and bowel, with the appearance of flaccid paralysis. The quadriceps and tibialis anticus and peroneal group of muscles are most frequently involved. The deltoid is often paralyzed. In the bolbopontine type, the cranial nerves are involved with ptosis, squint, Bell's palsy, etc. The glossopharyngeal is frequently involved with paralysis of the muscles of deglutition. Respiratory paralysis is not frequent but often leads to death.

Should the patient ride out the three phases just noted, the fourth phase or stage of recovery may follow promptly or be delayed months or years. As the infection dies out the undestroyed nerve cells tend to recover, with fading of the paralysis and temporary return of pain and tenderness. If the axis cyclinder of the nerve trunk has been destroyed the paralysis will be permanent. This will appear as wasting and atrophy of muscles, loss of weight, ataxia, thermic changes in the part involved, crippling and contractures. Despite the fury of the storm as just outlined very few patients remain permanently bedridden. Those traveling the more rocky detour, pause at the tomb while an angel records their presence on leaves of gold, while those whose lives just hung by a hair, will tarry till the repairing forces of the body and man secure a measure of usefulness.

The treatment of the disease is still open to much controversy, yet all are in accord on general principles and no one believes there is a specific. Absolute rest in bed with careful nursing are primary requisites. Pain and tenderness may require sedatives with hot applications or tepid wet packs. The patient should be moved and disturbed as little as consistent with proper care. If weakness develops in a group of muscles, in order to protect them and prevent stretching, contracture and deformity, the effected member should receive careful orthopedic treatment with complete relaxation and rest in an overcorrected or neutral position and should be made secure by light weight plaster casts, splints or other forms of braces with moderate extension. Massage or manipulation can better be deferred until the painful, sensitive stages have faded. Should the bladder or anal group of muscles be paralyzed, it has seemed better to postpone catheterization or enemas as long as possible, since, the bladder and bowel may empty themselves reflexly. Specific therapy has been ardently pursued but not captured, yet the elusive "Reynard" is being slowly crowded to his den. The hardest pressing pack in the chase, are those fed on that vital mobile tissue within the blood vessels. The serum of convalescent patients and about 80 per cent of healthy patients will neutralize poliomyelitis virus[25], but when either of these serums are administered intraspinally, they accomplish little or nothing and may do harm[26]. The advocates of such serum therapy maintain they have merit when given intravenously and intramuscularly, as soon as the first symptoms occur, or in the second phase of the syndrome. Amounts of from 100 to 300 c.c. are used and given either by transfusion or into the tissue. The dosage may necessarily need be repeated from 1 to 4 times, unless contraindications prevent[27]. Those opposing the use of human serum maintain the evidence gained by treating alternate patients and by the observation of controls, seems to show conclusively that no improvement is gained[28]. An anti-poliomyelitis streptococcus serum has been available but skepticism has definitely limited its field[29]. Within the past three years, the improvement in preparing this serum has so enhanced the globulin fraction as the agent of immunity, as to revive the waning interest[30]. Normal horse serum, diphtheria antitoxin and acute meningococcus and antipneumococcus serums administered intraspinally have been of no value[31].

Many other methods have been diligently tried, as repeated lumbar puncture combined with continuous spinal drainage while forcing hypotonic saline solution[32]; the use of hypertonic solutions to relieve or reduce cerebral edema; intra-muscular injection of milk; intraspinal injection of methenamine; fever and roentgen therapy. These methods, for the most part, seem to have lost their interest, except for the forced perivascular drainage, which retains a lively interest. Respirators occasionally save lives, but the selection of the type of patient who will be benefited by a respirator requires considerable experience and judgment[33]. During the epidemic in New York, in 1931, nearly five times as many patients treated in a respirator died, as compared to those not so treated[34]; these for the most part were the desperate cases. In the bulbar type of poliomyelitis, atropine, ephedrine and repeated lumbar punctures are not to be recommended. The effects of vitamin imbalance on the disease is still in the experimental stage but the results with animals seem promising[35]. The new dye, "sulfanilamide," was used energetically by one or more of the members of the special committee during the epidemic of the past summer[36]. There appeared in the press of February 10, this year, a very interesting article from the work done at the College of Physicians and Surgeons and Presbyterian Hospital of New York, under the direction of Dr. Dochez, on sodium sulfanilyl sulfanilate, a distant relative of sulfanilamide, which offers promise as based on the results of animal studies. It will receive thorough trial on the human cases.

The prevention of this crippling and killing disease has received most energetic investigation. The brains and spinal cords of monkeys infected with the poliomyelitis virus have been suspended in formaldehyde to make a vaccine of killed virus, after the method of Park and Brodie[37], and attenuated with ricinoleate, after the method of Kolmer[38], and injected into more than 10,000 children. The results following preventive vaccination appear promising, yet there is much controversy as to whether killed virus will immunize and whether attenuated virus has lost all infective properties. Isolation for three weeks of patients and those who have been in contact with them has been required by many Boards of Health since 1916, but the evidence then and now does not indicate any definite accomplishment by such procedures[39]. During the epidemic in North Carolina in 1935, only 8 patients of 622 gave a history of contact with another patient[40]. The use of nasal sprays has many supporters and just as many dissenters. Their real merit remains for the future to determine.

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THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

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Published monthly at Booneville, Mississippi

Annuol subscription $1.00

Entered as second-class matter, January 19, 1926, at the post-office at Booneville, Miss., under the Act of March 3, 1870.

Make your arrangements now to attend the Thirty-Second Annual Meeting of the Southern Medical Association in Oklahoma City November 15-18 inclusive. It will be good to be there.

Dr. Harvey F. Garrison, Sr., is spending a few days in Washington City in the performance of duties as councilor of the Southern Medical Association from Mississippi.

Dr. James C. Green has just finished a year's fellowship in general surgery in the New York Postgraduate Medical School and Hospital under the auspices of the New York Commonwealth Fund. He is now located in Tupelo for the practice of general surgery.

You will note the program of the Southern Tuberculosis Conference and Southern Sanatorium Association on Sept. 19-21 at the Brown Hotel, Louisville, Ky., in the Mississippi News. Dr. J. D. Riley of Booneville, Ark., is president and Dr. L. N. Todd of Augusta, Ga., is secretary. This meeting will be of outstanding interest to the Southern states.

The American Congress on Obstetrics and Gynecology will be held in Cleveland, Ohio, September 11-15, 1939. The proposed American Congress will include participation not only by medical groups but by those devoted to nursing, public health and institutional administration. The details of the program will be announced later. Dr. George W. Kosmak, New York, who is very pleasantly remembered as appearing on our program of the Mid-South last February, is Chairman on Subcommittee of *Medical Publicity.*

It is a great honor and an outstanding distinction for the Northeast Mississippi Thirteen-County Medical Society to have Dr. George W. Crile of Cleveland as its guest speaker at the third quarterly meeting at Amory on the 20th of this month. No man has been and is more outstanding in American Medicine than Dr. Crile. He has contributed voluminously to medical literature by addresses, by essays and by books. He has just published a new book, *The Surgical Treatment of Hypertension,* and on this subject he will read his paper before this district society. Dr. Crile has taught by word and by practice some very important principles in medicine. He has taught the importance of knowing each patient and giving individual attention to him as well as the disease with which he is affected. And no other person in the world has done more to teach respect for human tissue. Trauma is an insult to tissue that must be settled in the healing, according to his ideas. The service he has rendered in this field cannot be over estimated. Dr. Crile is a very versatile man, a magnetic speaker, and a great American citizen. He is a great leader in organized medicine. The honors he has held at the hands of his fellow doctors are many and worthily bestowed. He is filling with outstanding distinction the place left vacant by the death of Dr. Franklin Martin in the American College of Surgeons. He is now president of the Gorgas Memorial. We are happy to have him. We hope many of our doctors from over the state will hear him. The Monroe County doctors are to be congratulated on securing him for this meeting, especially Dr. G. S. Bryan, we are sure, who is a most ardent admirer.

The medical profession of the mid-South deeply regrets the serious accident that befell Dr. Eugene Rosamond of Memphis, specialist in baby diseases. He is thoroughly versed in this specialty and he is expert in the practical application of his information. He has been very prominent in organized medicine in the South. He is a loyal friend and a congenial personality that always inspires you to greater efforts. We wish for him an early recovery.

The calling together of the delegates of the American Medical Association at this time seems to us a wise decision. No harm should come of a free discussion of our medical problems. They are big enough, difficult enough and important enough to warrant the very best thought of the entire membership. The carrying of modern medicine to the masses is weighing most heavily upon the rank and file of the physicians. The general practitioner is staggering under the load. The middle class needs better medical service. If one person deserves a reasonable amount of medical care every one in the nation deserves it. No man can be sick and die unto himself. As a local community cannot construct a national concrete highway the small town and rural community in the South cannot pay for modern medical service under present economical conditions. And yet if we break the tie of personal interest and effort and sacred choice between the doctor and the patient, money alone will not compensate. The free choice of doctor, nurse and hospital should not be given up, not as long as we have American independence. It is time for the general practitioner to think and to act, it is time to accord him a part in reaching a conclusion that will make medical service more universal to the public and at the same time bring to him a living income. In service to the public it is important for the practitioner and the specialist to work in brotherly co-operation, important in the application of modern medicine and important in reaching a sane conclusion in medical economics and medical ethics.

In the last few issues of this journal we have called attention to the rapidly changing aspects of medicine and medical economics. We called attention to the fact that the rural districts are inadequately supplied with doctors by reason of deaths, removals and retirements from practice; that there are no new or young men replacing those who drop out and further that those who remain in the field are growing older all the time and will soon go the way of all the world. At the same time the number of indigent sick is very much greater than at any time in the past—consequently the load of non-paying work is so great that the few remaining doctors simply cannot carry it. Also, the paying patrons are thinning down to the vanishing point. It seems that those who can and should pay are coming more and more to regard a doctor's account as one that may be delayed or wholly ignored, forgetting the fact that doctors must pay their bills or lose credit and standing in the community in which they live and labor. We have just received a letter from one of the state's leading men saying that he had done major operations within the last sixty days for which he had been paid less than two-hundred dollars. This man does, in addition to his surgery, a general work including much obstetrical service. It naturally follows that collections for that class of work are lower and slower than for surgery. Something needs to be done—something should be done—something must be done, if doctors continue to work and the public continues to receive medical service when it is needed. The burning question that must be answered in some way, right or wrong, is what should be done—what can be done. Let us not forget that the interests of both the people and the doctors demand that the condition that is rapidly growing worse be recognized and corrected. For some years "state medicine" in some form has been seen in the offing. No one realizes more fully than do we that state medicine cannot replace the old system with satisfaction, to either physician or patient. Should state medicine be forced upon us, there can be no question but that the high standard to which American medicine has attained, must suffer greatly. This is so evident that no comment is necessary. But if it **must** come this writer believes that the plan submitted to the Atlantic City meeting and sponsored on the floor of the United States Senate by the Hon. J. Ham Lewis, is the best plan so far proposed. But understand, we are not sold on **this** plan; for it runs counter to all our cherished precedents and traditions. But we must realize that we live in a changed

This is not satisfactory as the relaxed foot does not correspond in size and shape with the weight-bearing foot. Many feet will spread as much as an inch when weight-bearing. Also the length of the foot increases, so that in measuring a foot for a shoe the patient should always stand. In this manner the true size of the foot will be obtained. It is very important that the base of the great toe should be exactly opposite the angle on the medial surface of the sole at the junction of the instep and the forefoot. This is the area of greatest flexibility and unless this region is properly fitted to the foot, discomfort will result. The shoe should be sufficienty broad to allow absolute freedom of the forefoot within the shoe. A very good practice is to outline the foot with a pencil with the patient standing, then outline the shoe over this area. If the shoe is broad enough to give the foot comfort, it will be found that the outline of the sole is broader than the outline of the foot. It is not at all infrequent to have a patient complaining of her feet stating that the best shoes are always purchased, yet discomfort results. Examination will then reveal that the shoe will be narrower than the foot. To give comfort it is necessary that the extreme style lasts be avoided and the shoe must conform to the outline of the foot, rather than customary practice of making the foot conform to the shoe. In fitting shoes to young people and to ladies, it is difficult to explain to them the necessity of wearing a large shoe. It is usually much easier to fit a shoe to the individual's foot than to fit one to his head! Unfortunately, the public has been misled into believing that it is necessary to have snug shoes instead of loose ones. The greatest relief that could be given feet would be to apply gloves instead of stiff soled shoes. In treating ladies with foot disorders, it is unnecessary to remove all dress shoes, if the individual can be made to understand that the disorder from which she suffers, is that of foot constriction and that foot freedom is the treatment of choice, it will be a big help. It can also be explained that for dress purposes, she may wear any type of shoe desired to fit the occasion, but for house wear, or for wear during working hours which should consist of at least seventy-five to eighty-five per cent of her time, a low-heeled broad-toed shoe should be worn. It should also be made clear that a shoe of this type should be worn constantly not only for the time being until relief is obtained, for when she returns to wearing an extreme last for long hours, the same disorder will soon make its appearance. Needless to say, the above instructions as to fitting shoes applies to those with heels not over one inch high. I am unable to give any help in fitting high heels as these are unphysiological and cannot be built to fit.

DISCUSSION

DR. WALTER E. JOHNSTON (Vicksburg): I enjoyed Dr. Blake's paper very much. He has covered the subject so admirably that I hardly know what to discuss. Dr. Gardner probably hit the nail on the head a few minutes ago when he said this was the first paper of this type to be discussed at a medical meeting in Mississippi. This is very unfortunate for the medical profession. It is very unfortunate that the medical profession has sat back and let the quacks and the shoe salesmen treat feet. It is very apparent that in the last few years a lot has been done about the feet, and it is bad that such accomplishments have not come from the medical profession.

A lot has been said in the past few years about the treatment of feet in lay magazines, etc., and in most cases it is some quack or some individual who thinks he is an authority on the subject.

The medical profession has not been taught enough of the foot ailments. He is not familiar with what can happen to the feet. Medical schools take it for granted that we know all about the feet, and we think we are too high to stoop down and treat the feet. We usually hesitate to put ourselves in the position of a chiropodist. I know it is pretty hard sometimes to take what the patient will hand you when she tells you she did not know that you were a chiropodist. You then have to go to all the trouble to explain what a chiropodist is and what you are trying to do. It is a hard proposition to take some of the knocks they give you, but nevertheless a patient with painful feet is sick, regardless of what you think about it, and that patient should be treated accordingly.

There is one point that I would bring out that Dr. Blake did not mention—exercise. Regardless of how much we try to improve the feet by proper shoes, supports, etc., proper exercise of the foot muscles is absolutely necessary to put that foot back into a normal condition. Such exercises are very simple. You can instruct the patient to stand on a step surgery is the only method of relieving this complaint.

Apophysitis is a complaint frequently found in young rapidly growing individuals and consists of a soreness on the posterior heel in the region of the attachment of the tendo-achilles. This is an inflammatory process of the epiphysis in this region and is most frequently caused by pressure from the counter of the shoe. It is a very simple matter either to buy shoes with a soft counter, or to have the rigid portion removed from the back surface of the shoe. In most instances this gives immediate relief.

Fungus infection of the feet is a very frequent finding. It is estimated that more than ninety per cent of all people have this disorder to some extent. Only a few of these sufferers come in for treatment compared to the number suffering from the disorder. Frequently, cases appear which seem to defy all types of treatment. In these patients it will be found that there is an excess perspiration. Experiments carried out by dermatologists and orthopaedists have revealed that improperly fitted shoes will more than double the amount of perspiration on the feet. It is well known that the fungus grows best in a warm moist location. Drying greatly aids in controlling the disease. It will be found that most of the persistent cases of athlete's foot can be greatly improved and the rate of recovery hastened if larger shoes are applied.

Arthritis in feet is comparatively common and frequently gives more trouble than arthritis elsewhere because the feet are in constant use. Treating this disorder is more complicated than the simple complaints and I will not go into it here.

Plantar warts are one of the many complaints from which patients suffer. This is simply a wart on the sole of the foot and weight bearing causes it to become buried and surrounded by callus. These are frequently misdiagnosed as simply being a callus, but if a careful examination is made, the underlying growth will be found. Removal of this mass is the only treatment that will give relief. Many treatments have been described, but excision or removal by electrocoagulation is best.

Pes planus or flat foot is a frequent diagnosis, but in many, many cases the complaint here is more that of an improperly fitted shoe than it is of an actual alteration in the anatomical arch of the foot. There is an enormous variation in the height of the arches and because one individual's foot does not have the same contour as another, does not mean that he is having symptoms from this any more than an individual with a flattened nose has a definite abnormality. It just happens that a flat foot is normal for this particular person. Negroes as a race have flat feet and they rarely complain of this deformity. Occasionally, an individual actually suffers from the arch of his foot and he has usually been the rounds of the shoe salesmen having various types of treatments and wearing various types of patented shoes and arch supports without results. These persons are the true sufferers of flat feet and actually need some type of mechanical stabilization for the feet. In these instances a plaster of Paris impression should be made of the feet and from this a properly fitted arch support should be built. On many occasions patients have come in stating that they have seen a doctor in reference to their feet and have been sent to purchase arch supports at some shoe store. This is most unfortunate, as fitting the proper support to a patient is very important and is a greatly neglected field. A physician would never tell a patient simply to go down to a store and buy a pair of glasses to correct his vision, any more than a dentist would suggest going to a supply house and simply order a set of teeth. Eyes and mouths do not come in stock sizes and shapes, neither do faulty arches. The two feet rarely have exactly the same contour or the same defect, and for this reason, supports should be specially built to fit the individual foot and the only accurate way to do this is from a plaster of Paris model. The correction of this disorder does not stop here. A shoe should then be fitted over the arch support, and in fitting this shoe, the foot should receive all of its support from below and should never depend on the sides of the shoe for support. Contrary to the general belief, shoes built to support the feet ordinarily defeat the purpose for which they are built, for instead of giving support they usually cause constriction. The snugness of this shoe adds to the patient's comfort to begin with, but as time passes, it exaggerates the condition from which he is already suffering.

The method usually used for measuring for shoes is correct in principal, but is not carried out properly. Most feet are measured with the patient sitting down and the foot relaxed.

den cramp or burning pain in the forefoot usually about the base of the fourth toe. This comes on suddenly and without warning and rarely makes its appearance except while a shoe is being worn. This pain is so severe that it is not infrequent that the sufferer must stop regardless of what is being done and remove the shoe. This disorder is much more frequent in women than in men. Metatarsalgia is pain through the region of the heads of the metatarsals. This is more or less chronic, coming on gradually and increasing in severity as time passes. This disorder again is more frequent in women than in men. Both of these are found in people who are wearing shoes which do not fit. In rare instances this is found where there is a flattening of the transverse arch not associated with improper shoes, but this is the exception. The treatment of these conditions is, first of all, remove the type of shoe being worn and replace it with one which will permit a broadening of the forefoot. Also lower the heel so as to approach as nearly as possible a flat bottom for the shoe. Usually a one inch heel is sufficient. A pad of thick felt cut to fit the shape of the fore foot and fitted into the hollow just posterior to the heads of the metatarsals so that weight is borne on this pad practically always gives much comfort. This pad can be held in place with adhesive and should be changed about every five to seven days. Frequently, changing the patient's shoes and wearing a pad of this type for approximately three weeks will give permanent relief and it will not be necessary to wear a permanent support for the forefoot. In cases where a permanent device is necessary, there are two methods of treatment. One is, a plaster of Paris impression can be made of the foot and sent to any good brace maker, who can make a very satisfactory support with a thick metatarsal pad which will give very satisfactory comfort. This support can be removed and placed in other shoes, providing they are all built with the same neight heel. The other treatment is on the shoe just posterior to the metatarsal heads, a leather bar can be placed across the sole so as to give somewhat the same effect as the pad inside the shoe. This bar will remove excess pressure from the metatarsal heads and in turn give relief. It will be necessary to place this device on all shoes that are worn. Needless to say, the one chief object to be sought in giving relief is sufficient forefoot room in the shoe. In rare cases of Morton's toe, it is necessary to remove the distal end of the metatanse of the fourth toe to give relief.

Bunions. These result from wearing a shoe which is too short. This is more frequent in women than in men, due to elevated heels. Walking on an inclined plane necessarily makes the foot slide forward and the weight will be thrown on the foot in its long axis instead of across the long axis. The toes and structure of the foot are formed to bear weight on the bottom at a right angle to the sole and when the heel is elevated this angle is grossly altered. This changes the mechanics which the foot is built to tolerate and results in some abnormality or deformity. In early bunions the treatment is change to shoes which will allow the foot to expand to its full length without obstruction. Also the shoe must be broad enough to permit lateral spread. In many cases a pad applied to the sole will help a great deal. The same pad as described for metatarsalgia is used. In cases where bunions are acutely painful or inflammatory, rest in bed, elevation of the extremity and hot magnesium sulphate packs are the treatment of choice. Occasionally, this requires several days for relief, but usually gives comfort. In the older cases of bunions where the typical marked hallux valgus deformity has resulted, surgery is the only treatment for relief. This, when properly done gives very gratifying results, improves the patient's ability for prolonged standing and walking, also makes it a much simpler problem to obtain shoes that fit properly.

Calcaneal spurs are found in many patients who have an arthritic tendency. In the past it has been thought that calcaneal spurs were associated with a gonorrheal infection. This is true only in a small per cent of cases. Patients with spurs have areas of tenderness on the soles of the heels. These are located at the junction of the plantar fascia and the os calcis. These begin as inflammatory processes and later develop into bony ridges across the lower anterior os calcis. They give the sensation of walking on pieces of gravel in the shoes. Patients with this complaint can usually be given relief simply by placing a large pad about one-half of an inch thick in the heel of the shoe, cutting out an area to make a hole or dimple over the site of tenderness. This is a very simple treatment and will usually give complete relief. In rare instances,

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

Painful Feet*

THOMAS H. BLAKE, M.D.
Jackson, Mississippi

The importance of usable pain free feet is frequently overlooked, but if placed in the form of dollars and cents, can be made quite impressive. Painful feet can easily cut down on one's efficiency as much as ten to twenty-five per cent. On a ten per cent basis at the end of a year, one's efficiency has cost him more than one month's time, so that we are justified in giving more serious attention to this matter.

The scope of this paper will be limited to the ordinary ailments or simpler disorders associated with painful feet. This will include corns, callouses, Morton's toe, anterior metatarsalgia, calcaneal spurs, the simpler types of flat feet, early bunions, apophysitis, plantar warts and some cases of epidermophytosis.

The major portion of all foot disorders is due to trauma and by this is meant most frequently, chronic or accumulative trauma. The response on the part of the foot to these various injuries results in one or more of the above mentioned disorders. This paper will not include the congenital and extreme abnormalities of the feet. Of painful feet, more than ninety per cent are found in women, and in all probability, the reason for this is the present trend of styles in ladies' footwear. The average working individual walks about nineteen miles a day, and if weighing one hundred and fifty pounds, about eighty tons of accumulative weight will be applied to the feet. It can easily be imagined the trauma that can result from this amount of repeated injury. The one agent causing more than ninety per cent of all foot complaints is poorly fitted or improperly fitted shoes. Unfortunately, the manufacturers of shoes are primarily in the business for making profit which in turn may encourage them to make misrepresentative statements and incorrect advertising in reference to feet and shoes, just as manufacturers of patented medicines may do in reference to their products. It must be definitely remembered that the more patented and artificial appliances which are placed in shoes to give foot relief, the more grief will be the result. By nature we were definitely intended to walk barefooted on a somewhat resilient surface. Civilization has placed us on hard surfaces, and in an effort to add to our foot protection, it has not stopped at an effort to protect the feet, but has gone to the stage where the protector, that is the shoe, does a great deal more harm to the foot than the agents from which it is attempting to protect it. It is a very definite fact that the people who have the best feet, the most pain free and useful feet, are those who allow themselves foot freedom. Our present method of buying shoes is very haphazard. A shoe salesman is not trained in feet, nor does he know the mechanical principal involved. He simply knows about the foot and about the shoe what the manufacturer wants him to know. He has no impartial training to explain to him the various reasons for the various types of shoes. If, in this paper an impression can be made that feet should be given freedom rather than protection and support, I will feel that this little article is a success.

A corn, as we all well know, is the response on the part of the skin to a chronic trauma or irritation. Corns definitely do not result if the shoe fits unless there is some mechanical imbalance of the foot. A shoe which permits undue pressure at any point on a foot will produce a skin irritation, and in all proability, a corn or callus as time passes. The difference in a corn and a callus is usually a corn is placed over a joint at an angular portion of the extremity, whereas, the callus is usually thought of as being on a flat surface. The treatment for both of these is properly fitted shoes.

Morton's toe and metatarsalgia are very closely related disorders. Morton's toe is a sudtion of cancer, discusses its etiology, especially cancer of the breast, its pathology, symptomatology. Diagnosis and tests of diagnosis are clearly presented, metastases and association of cancer of the breast with other organs of the body. Extensive attention is given to all stages of treatment with complete presentation of operative and irradiation techniques and procedures. The book is built upon a frank basis of factual data, summarized at the end by the author: "We should refrain from overtreatment which is common. We must always remember that the cure, i.e., the regressive process of a cancer, cannot be forced . . . It is also necessary that *periods of freedom from treatment* be permitted, irrespective of the type of treatment, so that the organism may develop a resistance to the poisonous substances produced by the metabolism of the disintegration of the tumor . . . The cancer therapeutist should devote more attention than is usually given to the well-being of the host, for after all it depends upon the general reactions of the patient whether recovery or death ensues."

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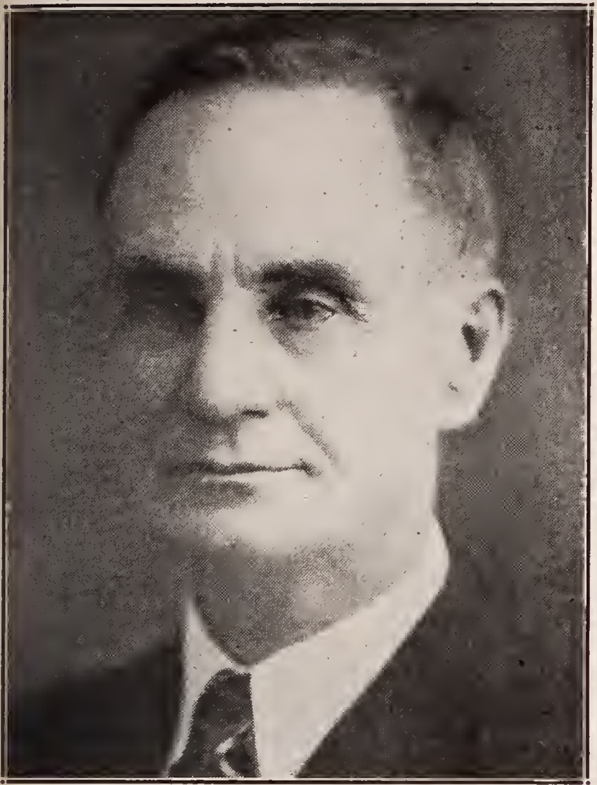
*Read before the Section on Surgery at the Seventy-first Annual Session of the Mississippi State Medical Association, Jackson, April 20, 1938.

Published by C. V. Mosby and Co.
Price: $10.00.

DR. W. A. EVANS

Dr. W. A. Evans of Aberdeen, who will discuss "Preventive Pneumonia" at the September meeting of the Northeast Mississippi Thirteen County Medical Society in Amory on the 20th. This society is very proud of Dr. Evans. He lives in Aberdeen but the world listens when he speaks on a medical subject. He is one of the country's most versatile men, speaks with authority on almost any subject.

DR. J. RICE WILLIAMS



Dr. J. Rice Williams of Houston, Speaker of the House of Delegates of the Mississippi State Medical Association, who will appear on the program at Amory and discuss "X-Ray Therapeutics." He is one of the best qualified in our state to speak on this subject.

BACK FROM OLD MEXICO

Dr. and Mrs. H. B. Sutherland and daughter recently made a visit to Old Mexico. They had a good time but came very near being caught in the great flood of the Colorado River.

VISITS DR. McDOUGAL

Dr. Myres S. McDougal, professor of law at Yale University, and Dr. L. L. McDougal, Jr., pediatrician of Paris, Texas, recently paid a visit to their parents, Dr. and Mrs. L. L. McDougal, Sr., here.

BOOK REVIEWS

The x-ray is a necessity in every modern hospital and clinic. The science is young and has not been given much time as a rule in the curriculum of the average medical school. The well-established practitioner and surgeon of today was not taught very much in x-ray, and he has been at a disadvantage because books covering the subject in a systematic order were not available. This science cuts squarely across the field of medicine and surgery, with diagnosis as the broadest point. Dr. Rigler has come to the rescue with an outline on Roentgen Diagnosis, one edition for students and one atlas edition.

In the student's edition the general principles of roentgen diagnosis are discussed and then general and specific consideration is given to bones and joints, the thorax, the digestive tract, and the urinary tract. In the Atlas Edition this general plan is followed and in addition the Pictorial Atlas presenting roentgenograms, teaching drawings, and schematic diagrams. In the reading matter and in the atlas the normal tissue and the normal system is first discussed along with the anomalies and then the abnormal along with special and unusual conditions and diseases. The entire plan of the book is very logical and the subject matter is presented very clearly and very concisely. With a hundred or more hospitals and clinics in Mississippi with as many x-rays and more it seems that this book should meet with a ready sale at once. We cannot think of a book that is more practical and should be in demand more than this Atlas Edition in our state especially. The student's edition is only three dollars and with the atlas it is six dollars and fifty cents. The author, Dr. Leo G. Rigler, B.S., M.B., M.D., is professor of Radiology of the University of Minnesota, Minneapolis, Minn. The books are published by the J. B. Lippincott Company of Philadelphia, London, Montreal and New York.

Cancer, With Special Reference to Cancer of the Breast, by R. J. Behan, M.D., F.A.C.S., Pittsburgh, Pa. Until some one man, in tune with the Infinite, finds the way to conquer cancer, the clinician cannot fail to welcome the research and reports of men like Dr. Behan who give all of their time to the subject. Indeed, he hopes that his most comprehensive treatise will assist in bringing further success, for he says, "It may be that one, possessed of an analytical mind and a clear vision, may by combining the multitude of facts discovered in cancer research formulate new concepts and a clearer understanding of the etiology and the therapy of this disease."

The book consumes 844 pages, prolifically illustrated. It opens with a general considerapresident-elect, secretary, and editor attend this conference, or have a personal representative there. So, if for any reason you are unable to attend, please select and give me the name and address of some outstanding medical leader in your state, who can attend and represent you at this conference. It is extremely important. Your co-operation and any suggestions you may have to contribute to the success of the conference will be appreciated. The program will be mailed later.

Sincerely and fraternally yours

Harvey F. Garrison

DR. LeROY LEAVES BOONEVILLE

Dr. A. G. LeRoy, wife and young daughter, have moved to Georgia, his native state. He will take an extended course in public health and then be located in Georgia. Dr. LeRoy spent four years in Mississippi associated with the Anderson Clinic at Booneville. Not only this clinic and Booneville regretted to see him leave the state, but all the profession who formed his acquaintance and knew his worth.

PROGRAM AND INVITATION OF THE NORTHEAST MISSISSIPPI THIRTEEN-COUNTY MEDICAL SOCIETY

Third Quarterly Meeting Tuesday, September 20, 1938, at Amory, Miss., Monroe County, 1:30 p. m., in the City Hall.

Following the scientific program a banquet will be held for the visiting doctors and their wives, given by the doctors of Amory and Monroe County, in the dining room of the Methodist Church.

PROGRAM:

Meeting called to order by the president, Dr. A. J. Brown, Iuka.

Invocation by Rev. J. A. George, pastor of Methodist Church.

Reading and adoption of minutes of last meeting.

Papers: "X-Ray Therapeutics"—Dr. J. Rice Williams, Houston.

"Preventive Pneumonia"—Dr. W. A. Evans, Aberdeen.

"An Analysis of the Indications and End Results of Surgical Treatment in 425 Cases of Essential Hypertension"—Dr. George Crile, Cleveland, Ohio.

MISSISSIPPI STATE MEDICAL ASSOCIATION

T. M. Dye, Secretary

The Speaker of the House of Delegates of the American Medical Association has called a special session of the House of Delegates to be held in Chicago September 16, 1938. Copy of the official call is being forwarded. Please advise other officers and members of official bodies of your association as well as general membership so far as possible.

OLIN WEST, Secretary,
American Medical Association.

and changing world. We must be prepared to meet, and adjust ourselves to, startling revolutions in the social, business and professional realms. Civilizations and economic structures have arisen, endured for a time and have fallen into decay. Others have replaced them, only to fade away. Still others, we presume, may come and go. Let us hope that the prophecy, "Babylon has fallen to rise no more," may not be fulfilled in the fate that seems to threaten us and our beloved profession.

We would not be so bold or presumptuous as to offer a remedy for the catastrophic conditions that exist today, but in our approach to the situation, we do so just as we would in an effort to diagnose and treat a desperate and unusual case of sickness. After the symptoms and physical findings, together with a carefully taken history, have been considered we arrive at a diagnosis. But until the etiology of the disease has been discovered, no specific or scientific treatment can be applied. Just so it is with regard to economic sickness. In the present situation the symptoms and physical findings are clear and unmistakable. The history of the case is somewhat uncertain and hazy. To get this history we may have to go back several decades. Then, every competent physician (and some who could not qualify as competent) found no difficulty in making a comfortable living—then everybody regarded a doctor's bill as an obligation, an honest debt. Most men who employed labor — especially planters who worked negro labor furnished medical care and paid for same. Then, any man who wanted work could get it and was paid a fair wage when the cheap cost of living was considered. Any farm produce or hand work found ready market for cash or its equivalent. The wealth of the nation was more equitably divided, there being but a very limited number of millionaires and comparatively few paupers. Then, there were few if any trusts and combines—competition in trade was fair and open—bankruptcy was infrequent—credit was easy and prosperity prevailed. With the advent of trusts and combines came unfair competition and trade conditions. The small business man was crowded out—wealth began to accumulate in fewer hands — stocks were watered and dividends were juggled—tax returns were falsified by the enormously rich while the poor were ground down by indirect taxation—men were elected to places of trust who served only the rich. Wars were planned, instigated and fought with the sole purpose of giving unholy profits to a few big business interests. Our boasted democracy, ultimately, became a mockery and was succeeded by feudalism as crude and crass as ever existed in any period of the world's history. Our economic crisis, viewed in the light of this partial history, makes the etiology clear and suggests a line of treatment that may be outlined in some future issue.—G. S. B.

Increased interest and a growing enthusiasm among the medical leaders indicate a very large attendance at the Conference for Presidents, Presidents-elect, Secretaries, and Editors of the State Medical Associations at the meeting of the Southern Medical Association in the Biltmore Hotel, Oklahoma City, Okla., on Tuesday, November 15, 1938 at 6:30 p. m. There never has been a time in the history of our profession when there was a greater need for wise counsel in medical leadership. Unwise, ill advised leadership at this time could seriously affect the progress of scientific and organized medicine.

The idea of having a conference of medical leaders at the time and place of the meeting of the Southern Medical Association carries with it the anticipation of having a "free for all," "off the record," "unhampered" discussion and an interchange of ideas relative to the problems of the profession at a time and place most convenient to all. As you know, the majority of the medical leaders in the territory attend the Southern Medical Association.

We have already secured several outstanding leaders to initiate subjects for discussion at the Conference. Dr. Irvin Abell, president of the American Medical Association, will speak on the subject, "The National Health Conference." This and probably some of the proceedings of the House of Delegates of the American Medical Association relative to medical economics will precipitate considerable discussion.

The Southern Medical Association extends a most cordial invitation to you and all of the participants of the Conference to be honored guests of the Association at a dinner immediately preceding the Conference. Members of the Council of the Southern Medical Association are especially invited to participate in the discussions and as the official representatives of the Southern Medical Association, act as hosts at the dinner.

It is very important that every president, or a high board or a Sears-Roebuck catalogue (they usually have one) and by bending the toes underneath, hold the foot in such a cramped position for about the count of five, then raise the toes up high and then count five; do this about ten times a day, and that simple little exercise will develop the muscles of the foot that are absolutely necessary to hold the foot in its proper alignment.

The foot was never meant to be in a shoe, and since it is it gets very little exercise, the result is we do not use the muscles of the foot and they are not developed. This is usually the cause of the foot being in its weakened condition. There must be some reason why we usually get a misfit, and it was surprising to me rather lately to find out one of the reasons why we never do get a proper fit at a shoe store. Now these little points may take up a lot of time, but still on the other hand, I feel if we knew more of the little points of the case we could instruct our patients better. I called a shoe salesman not long ago and asked him to put in a special type of shoe. He came to my office and we discussed the situation, and I wanted to put in one style of shoe in the different sizes. He sat down with a pencil and paper and enlightened me on a few facts I did not think of before. To put in that one style of orthopedic shoes for children and men and women would require him to put out about $3000.00 or more.

Then the other reason why patients do not get the proper fit is because they reach a certain time of life where they have been wearing a certain size shoe, regardless of what the salesman says—whether it fits them or not—they are going to have that particular size. If they have been wearing a 3 quadruple A they are going to go 50 miles to get a 3 quadruple A, and if you instruct the patient not to buy a shoe of a certain number or size, they won't do it. It is so simple in some cases that you can't even collect the bill. You tell them they need a bigger shoe and they will get perfect relief, and yet you send them a bill and see how quick you are going to be paid.

Again I will say that the patient that has a weak foot is a sick patient, so treat him accordingly.

DR. STANLEY A. HILL (Corinth): I rise to Dr. Blake's protection. He has just demonstrated with the slides an illustration that is difficult to believe. That situation not only occurs in Jackson but also in the hills of north Mississippi. I have a case very much the same as the one he demonstrated.

"A beautiful and chaste woman is the perfect workmanship of God, the glory of angels, a real miracle on earth, and the **sole wonder** of the world." To prove that a woman is the **sole wonder of the world** I have followed Dr. Blake's instructions and traced the foot outline of a recent "painful foot" case. I present this in the form of a crude exhibit which I shall pass along for your inspection. The exhibit is composed of a photograph of the shoe, a tracing of the outline of the bare foot superimposed on which is the tracing of the shoe sole, and an x-ray film of the shoe covered foot. The tracing shows the foot to be 7/8 inches wider than the shoe sole and 5/16 inches longer. After gaining this information I set about to determine whether or not the foundation of the shoe furnished room for the skeleton of the foot. Thin strips of lead; one each at the sides, one at the toe, and one at the heel were held to the edge of the shoe sole with adhesive tape. An anteroposterior x-ray film was made and the lead cast clear markings showing that the shoe sole is not even large enough for the bony framework of the foot. The other film shows the natural spacing between the heads of the metatarsal bones in the bare foot. All of you know the tendency in women to wear shoes that are too small. This emphasizes the point in a graphic manner.

"Actions speak louder than words." After watching the comparative tracing and inspecting the x-ray films, this patient did not have to be told that larger shoes would relieve the foot discomfort! Isn't it wonderful how wonderful women in a wonderful way will cramp their feet in ill-fitting shoes?

Although this shoe is not as severe as many, it demonstrates another faulty point in foot hygiene, the high heel. Many heels are so high that it makes the wearer go around sliding down hill at a 45 degree angle. This throws the weight of the body on the ball of the foot. It produces strain on the metatarsal arch. It wedges the toes in the shoe favoring the formation of bunions. It allows contracture of the tendo-achillis.

Information has come to me that Paris dictates a low heeled shoe this season. It is up to us to make the ladies realize the importance of practicing good foot hygiene.

It has been a pleasure to hear this instructive paper. Dr. Blake presented the subject matter in a most practical manner. I close, hoping to emphasize the fact that women wear shoes that are too small, causing untold pain and deformity by presenting the graphic proof just demonstrated.

DR. BLAKE closing): Just one word to add in reference to exercise. Exercise properly given is the best thing that can be done for the feet, but it will take about ten men and a little negro boy to make one person take exercise; they just won't do it. It only does good when carried over a long period of time, and very few people consistently do that. I have had a few who have done it, and they got excellent results. I want to thank the doctors for their discussion.

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Hoarseness*

(Color-Motion Picture Demonstration)

FRANCIS E. LeJEUNE, M.D.
New Orleans, La.

Few symptoms occur more frequently and are so universally disregarded as is that disturbance of laryngeal function which we recognize as hoarseness. Early recognition of the possible significance of this symptom may be responsible for the saving of many precious lives. Numerous conditions in their very inception appear so trivial that little attention is given to them. This is particularly true of hoarseness, because it occurs so frequently as a complication of a common cold, subsiding spontaneously, that little attention is given it. Any case of hoarseness lasting over a period of two weeks deserves and should have a thorough examination with the laryngeal mirror, for it is only by such a procedure that an early diagnosis can be made in cases of tuberculosis, syphilis, carcinoma and tumors of the larynx. The importance of an early diagnosis cannot be stressed too vigorously as many of these conditions in their early stages are amenable to treatment. The presence of hoarseness does not always indicate the existence of a serious condition within the larynx. It does indicate, however, that the accurate approximation, equal tension and synchronous vibration, which is so necessary for normal phonation, has been disturbed.

Jackson and Coates enumerate over sixty causes producing hoarseness. Visualization of a few of these causes by means of color motion pictures affords an interesting study and creates a more lasting impression than it is possible to convey by means of a word picture. For this reason I wish to present to you today, a series of color motion pictures showing clearly and accurately various types of laryngeal pathology responsible for the production of hoarseness. Screen presentation of a large variety of such lesions is obviously advantageous, not only for the teaching of the student, but also for the benefit of the general practitioner into whose hands come most of these cases seeking relief. Not only should the general practitioner be able to appreciate the importance of voice changes but the public at large should be made to realize that persistent hoarseness is the danger signal of the larynx.

The general surgeon, over a period of years, has conducted a campaign of education in which women have been made to realize the significance and seriousness of a lump in the breast. As a result of this campaign the mortality from cancer of the breast has decreased considerably. The laryngologists today are faced with the launching of a similar problem of education in which the public must be made to realize that persistent hoarseness is the danger signal of the larynx. It is the first symptom presented by intrinsic carcinoma of the larynx. The general practitioner and the public should be made to realize and appreciate the importance of voice changes. By waging a campaign of education we can make the public "voice conscious" and "hoarseness conscious." When this will have been accomplished we may expect to see a larger percentage of cases of carcinoma of the larynx in their early stages, thereby helping us in our fight against that dreaded disease of cancer.

Probably the most frequent single cause of hoarseness is an acute laryngitis resulting either from a cold or from an excessive use of the voice. Violent shouting at a football or baseball game will frequently produce a severe laryngitis and in some cases even produce a rupture of a vessel on the cords and the formation of a hematoma. Hoarseness is frequently seen in young children particularly when in addition to the acute laryngitis present there is also a subglottic involvement. These types of cases are usually spoken of as croup and readily respond to the proper medication. Diphtheria involving the larynx produces not only a marked degree of hoarseness but also is responsible for severe dyspnea which occasionally necessitates a tracheotomy. Since the introduction of toxoid as an immunizing agent against diphtheria, these latter types of cases are seen with less frequency. Whenever hoarseness occurs suddenly in children, the presence of foreign bodies must be borne in mind. Papilloma of the larynx is a frequent cause of hoarseness in children, and several such growths involving the vocal cords are presented by means of color motion pictures. By means of such pictures a clearer conception of the existing pathology is obtained than it is possible to describe by word. Various types of benign tumors occurring in adults are also presented and the mode of handling these cases briefly described.

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*Presented before the section on medicine at the Seventy-First Annual Session of the Mississippi State Medical Association, April 20, 1938.

Of all the changes that may occur in the larynx none is more significant than those presented by malignant growths. It is an established fact that in the early stages of malignancies occurring within the laryngeal box, 80 to 85 per cent of these cases can be cured. Unfortunately, too many cases of malignancy of the larynx come to the laryngologist when the disease is so far advanced that little or no hope for cure can be offered. I believe that this apparent disregard of the warning signal of the larynx is due more to lack of appreciation of the serious possibilities than to any other cause. When the public at large awakens to the realization that persistent hoarseness is the first and only symptom of intrinsic carcinoma of the larynx, we may then expect to see a larger percentage of these cases in their incipiency. It is a regrettable fact that too many advanced cases of carcinoma of the larynx are seen for the first time by the laryngologist. Unfortunately, intrinsic carcinoma produces no pain or discomfort, only mild hoarseness, and the patient is lulled too often into a sense of false security.

In properly selected cases intralaryngeal surgery may produce a complete cure. In other cases, more advanced or more extensive, a laryngo-fissure would probably be the operation of choice. In those advanced cases where the lesion is still confined to the larynx proper and with no external evidences of cervical metastasis a laryngectomy may be indicated. While roentgen ray therapy has proved to be a valuable adjunct in the treatment of carcinoma of the larynx, it cannot at the present time displace surgery as a method of choice in the treatment of cancer. Numerous views of malignant lesions are presented in their various stages by means of motion pictures and it is hoped that these pictures will help to make us more conscious of the dangers of hoarseness.

The Epidemiology of Tuberculosis*

FELIX J. UNDERWOOD, M.D.
JACKSON, MISS.

Only 56 years ago tomorrow Robert Koch presented his memorable paper on "The Aetiology of Tuberculosis," in which he stated: "If the number of victims which a disease claims is the measure of its significance, then all diseases, particularly the most dreaded infectious diseases such as bubonic plague, Asiatic cholera, and others, must rank far behind tuberculosis. Statistics teach that one-seventh of all human beings die of tuberculosis and that, if one considers only the productive middle-age groups, tuberculosis carries away one-third and often more of these. Public hygiene has, therefore, reason enough to devote its attention to so destructive a disease without taking into account that still other conditions, such as the relation of tuberculosis to perlsucht (tuberculosis of the mesentery and lymph nodes of cattle), engage the interest of public health[1]." Since the presentation of conclusive proof by Dr. Koch, that the tubercle bacillus is the cause of tuberculosis, medical science has made much progress in reducing the toll of this disease.

In Mississippi we are on our way to adequate control, but the road ahead is by no means a four-lane paved straight one. Since 1914, 44,069 people have died of tuberculosis in our own state, or an average of 1,912 cases per year. In other words, as many people have died of tuberculosis in Mississippi since 1914 as live in 23 towns having a population of 2,000 each. The average death rate per 100,000 population in the five-year period 1914-1918 was 148.8, and in 1932-1936 it was 60.1, a reduction of 59 per cent in the 23-year period.

The epidemiology of tuberculosis deals with the etiology, methods of spread, distribution as to geography, race, age group, climate, and so forth. It is the purpose of the paper to deal only with a few of the more epidemiological facts about tuberculosis, especially as these facts relate to Mississippi. It is a known fact that tuberculosis in most instances is the result of continued close contact with a case or consumption of raw milk from tuberculous cows. Whether a person develops symptoms of the disease is determined mainly by two factors: (1) the dosage of the infecting organism; (2) the amount of general and specific resistance of the patient[2].

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*Read before the Clarksdale and Six Counties Medical Society, Clarksdale, March 23, 1938.

Dosage of the infection is determined by the degree of contact with a case and the quantity of bacilli in the sputum of the case. These factors vary widely. The amount of general resistance of the host is determined by heredity, nutrition, housing, activity, and many other variables. Specific resistance is determined by the former experience of the individual with tubercle bacilli, such as frequency and dosage of infection and the inherent ability to develop immunity as a result of infection.

RACIAL AND AGE GROUP DISTRIBUTION

According to mortality statistics in Mississippi, the disease has been about three times as prevalent among Negroes as among white people, and the reduction in mortality has been greater in Negroes than in white people. In the period 1914-1918, the average tuberculosis death rate in the Negro race was 224.8 as compared to 60.5 in the white race. This had declined to an average of 90.7 in Negroes and 29.7 in white people in the period 1932-1936, or a decline of 59 per cent in Negroes and 50 per cent in the white race since 1914.

Age group distribution of tuberculosis deaths in the three-year period 1934-1936 in Mississippi shows an average death rate per 100,000 population of 7.8 in the group 0-14, 77.7 in the group 15-29, 94.0 in the group 30-44, and 61.0 in the group 45-74. These figures show that a large majority of tuberculosis deaths in Mississippi occur in the most productive age groups, from 15 to 44 years.

METHOD OF SPREAD

Evidence is rapidly accumulating which shows that tuberculosis is primarily a disease of family groups, and relatives and close friends of such families spread through continued close association with cases of the disease. The type of case to which one is exposed and the relative number of bacilli being expectorated by such a case has much to do with whether the contacts will develop manifest tuberculosis. Stewart, Gass, and Puffer[3] report that 322 household contacts, 172 or 53 per cent had x-ray evidence of tuberculosis. These were classified as follows: manifest tuberculosis 12, manifest arrested 10, latent apical 20, childhood type 16, and calcified lymph nodule type 114. They found further that 70 per cent of household contacts had a positive tuberculin reaction which increased in the various groups from 44 per cent in the group 0-4 years to 62 per cent in the group 10-14 years. The same investigators have shown that sputum positive cases are much more productive of infection in their contacts than are sputum negative cases. Of 105 family contacts of all age groups to sputum positive cases, 77 per cent had a positive tuberculin reaction while only 37 per cent of 444 family contacts to sputum negative cases were reactors. In the same study, it was found that 80 per cent of the family contacts of sputum positive cases and in the age group 10-14 had a positive tuberculin reaction while only 47 per cent of the same age group of the school population had a positive test[4]. These facts leave no doubt as to the importance of continued contact with sputum positive cases in the spread of tuberculosis.

The fate of persons in various age groups in contact with cases of tuberculosis has been determined by Opie, McPhedron, and Putnan[5]. They found that of white persons first exposed to sputum positive cases between birth and 9 years of age, 9.9 per cent of those living 12 to 14 years after the beginning of exposure had acquired tuberculosis. Of those of the same age group exposed to sputum negative cases only 1.9 per cent had acquired tuberculosis 12 to 14 years after beginning of exposure. It was also found that 20 per cent of those exposed to positive sputum cases at 10 to 14 years of age had developed tuberculosis from 10 to 14 years after beginning of exposure. Of these exposed after 15 years of age to positive sputum cases, 9.7 per cent had tuberculosis 10 to 14 years after exposure.

While the family group is probably the most important single group among which tuberculosis spreads, it is by no means the beginning and end of tuberculosis transmission. Downes[6] found through study of tuberculosis in a rural community that only 34 per cent of cases gave evidence of family contact with cases and concluded that the sources of infection of the other 66 per cent were extra-familial. He gives several examples in which the disease was spread through associations of neighbors, boarders and their landlord's families, and school friends. For instance, the wife in one family had active tuberculosis with positive sputum, and her 7-year old child later developed it. This wife was especially interested in twin girls in the family of a neighbor and spent much time associating with them. One of the twins died of tuberculous meningitis one year after beginning of exposure and the other twin developed adult type with a positive sputum. Another child nine years of age, and a sister of the twins, developed the disease. In addition to these cases, this primary case caused a case in another neighbor and relative. Two men who were cousins and neighbors of the original case lived alone. One of these men, 21 years of age, had influenza and stayed in the home of the original case and was nursed by her for three weeks. Two years later he developed tuberculosis with a positive sputum.

Another example is given whereby a senior high school girl after developing the disease transmitted it to three of her classmates who were her best friends both in and out of school. She had a positive sputum. These three classmates developed the disease within four years after their graduation from high school and no evidence could be found of their contact with a case other their friend mentioned above.

Many other illustrations of extra-familial spread of the disease could be given.

Numerous instances could be given showing the spread of the disease in family groups. All of you, I am sure, have seen the disease develop successively in different members of certain families. Within recent years in Mississippi much information had accumulated through investigation as to the importance of undiagnosed chronic fibroid cases in spreading the disease. These individuals have been told by physicians that they had chronic bronchitis, asthma, or bronchiectasis upon doing a hurried examination with stethoscope. Examination of repeated specimens of sputum from this type of patient often reveals the presence of numerous tubercle bacilli. I cannot urge too strongly that sputum examinations be made of such patients, especially by those physicians who do not have access to x-ray facilities.

In one instance, investigation was being made of a tuberculosis death reported on death certificate. The death was that of a 39 year old white woman. She had lived for several years with her father-in-law. There had been several tuberculosis cases in the family of her mother-in-law but this case had not been in contact with either of them. The father-in-law was 71 years of age, actively engaged in farming and had no complaint except a slight infrequent cough. He states that he had rarely been sick. Specimens of sputum collected from him showed numerous tubercle bacilli. He stated that when he was about 12 years of age, a man, bed-ridden with the disease, had spent a year in the home of his father.

ECONOMICS AND TUBERCULOSIS

No one can doubt that malnutrition has much to do with mortality from tuberculosis. This is probably one reason why tuberculosis mortality is so much more pronounced in Negroes than in white people. The Chief Medical Officer of the British Ministry of Health states: "The most sensitive indicator of malnutrition is, without doubt, the death rate from tuberculosis, and its relation to underfeeding was brought into relief by the fortunes of the war." This author states that the Prussian tuberculosis mortality increased 60 per cent from 1913 to 1919.

Stallybrass[8] has shown conclusively that there is close relationship between real wages and tuberculosis mortality—when real wages rise, tuberculosis mortality decreases and vice versa. Real wages is the factor which determines how well people are clothed, fed, and housed, and how much time is available for rest and recreation. Therefore, tuberculosis incidence is a problem in medical science and economics.

Much has been written relative to the spread of tuberculosis to human beings from tuberculous cows through milk. Rosenau[9] reports a series of 551 samples of raw milk examined by four investigations for tubercle bacilli. Of this series of samples, 8.3 per cent were found to contain bovine tubercle bacilli in sufficient numbers to infect guinea pigs. Park and Krumwidie report that of 1220 tubercle bacillus infections in human beings, 111 had bovine type. With these facts facing us, we cannot ignore the importance of pasteurization of milk and removing tuberculin reactors from producing herds.

Without a doubt, many infections result from promiscuous expectorating of sputum positive cases on streets, sidewalks, and in other public places. Droplet infection through exhaled air from ambulatory patients is another factor in spreading the disease. Improperly sterilized utensils in public eating and drinking places is another method by which it is spread.

SUMMARY

1. Tuberculosis has killed 44,069 people in Mississippi since 1914, an average of 1912 a year. Mortality has declined 59 per cent since 1914 in the state.

2. In most instances, continued close association is required to produce the disease in contacts of cases. Development of symptoms depends upon the dosage of the organism and amount of general and specific resistance of the host—both of which factors are quite variable.

3. Tuberculosis mortality in Mississippi has been about three times as high in Negroes as in white people. Mortality was 50 per cent in the white race and 59 per cent in the Negro race since 1914. In the three-year period, 1934-1936, the average death per 100,000 was 7.8 in the age group 0-14, 77.7 in the group 15-29, 94.0 in the group 30-44, and 61.0 in the group 45-74 years.

4. Household contacts to sputum positive cases are much more likely to develop the disease than household contacts of sputum negative cases, as shown by various investigations through x-ray and tuberculin testing.

5. Fate of persons exposed in different age groups is shown in that from 9.9 per cent to 20 per cent, depending upon the age at which exposure took place, developed the disease in from 10 to 14 years after beginning of exposure to positive sputum cases. A much lower per cent of those exposed to sputum negative cases developed the disease.

6. Only 34 per cent of a group of rural cases studied by Downes could be attributed to family contact. The other 66 per cent had extra-familial contact. Examples of extra-familial spread are given.

7. Evidence is given as to the relation of nutrition to tuberculosis mortality. Real wages have a direct bearing on mortality.

8. Drinking of raw milk from tuberculous cows, promiscuous expectorating, and the use of dirty utensils in public eating places are factors in the spread of the disease.

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MISSISSIPPI STATE MEDICAL ASSOCIATION

Organized 1867

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President-elect	J. P. Wall, Jackson
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Constitution and By-laws: A. P. Alexander, Como (one year); W. W. Crawford, Hattiesburg (two years); W. H. Frizell, Brookhaven (three years).

Budget and Finance: B. S. Guyton, Oxford (one year); D. C. Montgomery, Greenville (two years); John B. Howell, Canton (three years).

CHAIRMEN OF SECTIONS

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—PROGRAM—

EAST MISSISSIPPI MEDICAL SOCIETY

JUNE, 23, 1938, Lamar Hotel

3:00 p. m. "Diseases of Tonsils in General Practice and Their Treatment."—Earl Laird, M.D., Union.

Discussion by R. G. Hand, M.D., and R. M. Flint, M.D.

3:45 p. m. "The Classification and Treatment of Anemia."—Conley H. Sanford, M.D., Memphis, Tenn.

Discussion by T. G. Cleveland, M.D., and Karl O. Stingily, M.D.

4:30 p. m. "Urinary Infections and Their Treatment."—Chester D. Allen, M.D., Memphis, Tenn.

Discussion by J. T. Bailey, M.D., and J. L. Haise, M.D.

5:15 p. m. "Cancer As We Understand It."—John C. Henthorne, M.D., Jackson.

Discussion by C. J. Lewis, M.D., and Lowry Rush, M.D.

6:15 p. m. Dutch Plate Lunch $1.00.

The films of tuberculosis patients were shown by Dr. Hickerson of Sanatorium, and those doctors who had cases were asked for discussion. The meeting closed. The next meeting will be held at Meridian, Miss., September 22, 1938.

Meridian, July 23, 1938.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Hospital of Vicksburg, Tuesday, August 9. After a supper served at 7 p. m., the following papers were presented:

Gonorrhea.—Dr. J. A. K. Birchett, Jr., chairman.

(1) Sulfanilamide in the Treatment of Gonococcus Infections in the Male.—Dr. Temple Ainsworth, Jackson.

Discussed by Drs. Goodman, W. A. Smith, and M. T. Van Studdiford. Dr. Ainsworth closed.

(2) Some Thoughts on a Gonorrhea Control Program.—Dr. F. Michael Smith, Vicksburg.

Discussed by Dr. D. V. Galloway, Jackson.

Dr. W. A. Smith, Panther Burn, presented a case report of a child of ten years with convulsions every week for the past four years. Recently this child had coughed up a "stone" and there had been no more convulsions. The stone was presented.

Dr. A. E. Adams of the Charity Hospital presented a case of gonorrheal epididymitis and orchitis in an undescended testicle.

Discussed by Drs. Temple Ainsworth and S. W. Johnston.

Dr. D. V. Galloway, Jackson, asked and received endorsement of the Mississippi State Hygiene Association.

The Society requested that the president appoint a committee to draw up resolutions on the recent death of Dr. J. A. K. Birchett, Vicksburg.

The president appointed Drs. S. W. Johnston and F. M. Smith.

Dr. Edley H. Jones, superintendent, presented the report of the clinic conducted by the Society at the Charity Hospital for the month of July, 1938, and for the year July 1, 1937 to July 1, 1938. The yearly report showed 12,312 patient visits from forty Mississippi counties and fourteen other states.

Fifteen members and ten guests attended the meeting. Dr. B. B. Martin, Jr., president, presided.

The next meeting will be held Tuesday, September 13 and the subject of the meeting will be Surgical Diseases of the Gastrointestinal Tract. The committee in charge consists of Drs. P. S. Herring, chairman, B. B. Martin, W. H. Parsons, and A. Street. The essayists will be Dr. A. Street and Dr. W. H. Parsons.

Dr. J. P. Wall, President-Elect, and Dr. Lawrence W. Long, Councilor, Mississippi State Medical Association, will make official visits.

DESOTO COUNTY

Miss Ruby Bob Funderburk and Mr. John Clinton, Brownsville, were married recently at the home of the bride's parents, Dr. and Mrs. D. C. Funderburk, with Rev. E. M. Sharp officiating. Only relatives of the family were present. Immediately following the ceremony the couple left for a short honeymoon trip. They will be at home at Brownsville where Mr. Clinton is employed in a bank as bookkeeper.

Dr. and Mrs. D. C. Funderburk and family visited the Gulf Coast during the heated season.

Dr. and Mrs. C. Whitley Emerson and children enjoyed the sea breezes recently on the Mississippi Coast.

Dr. J. Rice Williams, Houston, speaker of the House of Delegates of the Mississippi State Medical Association, is conducting a school of instruction for Master Masons in the ten counties of northwest Mississippi at Oxford during the month of August. Dr. Williams is aptly fitted to do this work as he is well versed in Masonry. He is a past grand master of the state. Our president, Dr. Joseph E. Green, Laurel, has also happily filled this high office.

Drs. J. E. Green, J. P. Wall and Seale Harris were the essayists at a recent meeting of the North Mississippi Medical Society at New Albany. It is needless to say that the program was a good one. Dr. A. J. McIlwain, Bates-

Central Medical Society: J. T. Rainer, Yazoo City, president; Lawrence W. Long, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. D. House, Sledge, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: William P. Warfield, Clarksdale, president; N. C. Knight Clarksdale, secretary. Meets second Wednesday each month, Alcazar Hotel, Clarksdale, 12 noon.

Coast Counties Medical Society: W. W. Lake, Pass Christian, president; D. L. Hollis, Biloxi, secretary. Meets first Wednesday, each month at night.

Delta Medical Society: C. W. Patterson, Rosedale, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

Desoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4, Memphis, secretary. Meets first Monday of January, April, June, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Harrison, Philadelphia, president; Bob A. Cameron, Meridian, secretary.

Franklin County Medical Society: C. A. Everett, Bude, president; L. Costley, Meadville, secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: B. B. Martin, Jr., Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Mississippi State Charity Hospital, Vicksburg, 7 p. m.

Marshall County Medical Society: C. R. Senter, Byhalia, president, Herbert Phillips, Holly Springs, secretary. Meets second Thursday each month, alternating between Byhalia and Holly Springs.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary.

North Mississippi Medical Society: R. M. Adams, Ripley, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen-County Medical Society: Dr. R. J. Brown, Iuka, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September, December.

Pike County Medical Society: E. M. Givens, McComb, president; T. Paul Haney, Jr., McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Sunflower County Medical Society: U. S. Wasson, Moorhead, president; H. B. Cottrell, Indianola, secretary.

Tallahatchie County Medical Society: G. Lacy Biles, Sumner, president; G. D. Hightower, Webb, vice president; J. E. Powell, Charleston, secretary.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: R. B. Zeller, Hazlehurst, president; J. C. McGuire, Hazlehurst, secretary. Meets June 14, Walthal Hotel, Tylertown; September 13, Riverside Hotel, Monticello; December 13, Whitworth College, Brookhaven, 12:30 p. m.

Webster County Medical Society: E. F. Arnold, Bellefontaine, president H. K. Curry, Eupora, secretary.

Wilkinson County Medical Society: C. E. Catchings, Woodville, president; E. M. Butler, Centreville, secretary. Meets second Thursday, each month, with Amite County Medical Society, Centreville.

Winona District Medical Society: T. J. Brown, Grenada, president; S. B. Caruthers, Grenada, secretary.

COAHOMA COUNTY MEDICAL SOCIETY AND CLARKSDALE HOSPITAL MEDICAL STAFF

The Coahoma County Medical Society and Clarksdale Hospital Medical Staff was called to order in the dining room of the Alcazar Hotel immediately after lunch August 10.

Minutes of the previous meeting were approved as read. A general discussion of the unusual prevalence of sore throats was carried on with no definite conclusions reached.

Dr. J. L. Levy then read a paper entitled "Polydactylism," which was discussed generally.

A motion was made to have a motion picture at the next meeting and the society adjourned.

Clarksdale. N. C. Knight,

an appropriate agency for regulating anything else."

Philadelphia Inquirer. — "In proceeding against professional non-profit organizations, which are not concerned with the prices of commodities and in the ordinary sense are incapable of operating in restraint of trade, the Department of Justice has entered a field commonly regarded as outside the scope of antitrust laws.

"The Washington plan that has encountered opposition from medical societies differs from the group hospitalization plan recently adopted for Philadelphia with the cordial co-operation of organized medicine. In Washington a group has retained its own staff of physicians and operates its own clinic. Under the Philadelphia plan subscribers take out insurance against the cost of hospital accomodations and treatment.

"Whatever the outcome in Washington, Philadelphia has reason to congratulate itself on the agreement recently concluded between the Associated Hospital Service and the County Medical Society that will mean so much to the health of this community."

There are many others. It appears that public opinion does not agree with the justice of prosecution of the medical profession. It is difficult to understand why the right of a society of doctors or lawyers or any other group or profession to govern itself, within itself, should be questioned. A doctor is not forced to become a member of a medical society. Affiliation is by his own will and accord and by such affiliation he agrees to abide by the rules and regulations of the organization. If he does not care to abide by those rules and regulations, it would seem to be the right of the society to drop any contracts that may please him. It simply says to him, "We do not believe contracts are right and if you make them you can no longer be a member."

If the present proposed action is intended as a step to force so-called "state medicine," and even if it comes in some form, it is very doubtful if the competent doctor will suffer. Doctors who cannot now make a living will probably be used by the state to care for those who do not now pay for services. Pay patients will always insist on the present relationship with their physicians, and they will expect to pay.

CYCLES—CHEER UP

"IT IS A GLOOMY MOMENT in history. Not for many years—not in the lifetime of most men who read this—has there been so much grave and deep apprehension; never has the future seemed so incalculable as at this time. In our own country there is universal commercial prostration and panic, and thousands of our poorest fellow-citizens are turned out . . . without employment, and without the prospect of it . . ." When worrying too much about today remember that the following is reprinted from Harpers Weekly . . . of the issue dated October 10, 1857, 81 years ago. The Saint Louis County Medical Society Bulletin of April 22, brought the above to our attention.

"WE STARTED OUT WITH A constitution that was brief, pithy to the point, and flexible, asserting that God had created all men free and equal. This almost sacred document so arranged its provisions that a man was given a chance to prove himself capable of being a respected member of a group of self-respecting, sane men.

"And the whole experiment started, constitution and all, if memory reminds aright, because a short-sighted British king wanted his peaceful colonists to pay a tax on tea. And that small, almost casual levy was the last straw the patient colonists could stand.

"What in the name of all common sense, would Patrick Henry say if he came back to earth today?

"He would find not only tea taxed but the very country that he and his associates sought to rid of imposts, staggering under more laws, more levies, more handicaps and more bureaucracy than did France itself when the streets ran red and Mirabeau and Danton called the turn on a situation that made France the keystone of European governmental crisis . . . "—One way of looking at it, as expressed by the April issue of the Illinois Medical Journal.—(From the New York State Journal of Medicine, May 15, 1938.)

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION: Seventy-Second Annual Session and Thirty-Sixth Annual Session of the House of Delegates, Gulfport, May 9, 10, 11, 1939.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday, each month, Natchez, 7:30 p. m.

Amite County Medical Society: W. S. Stewart, Oskya, president; D. H. Thornhill, Crosby, secretary. Meets second Thursday, each month with Wilkinson County Medical Society, Field Memorial Hospital, Centreville.

nation's capital where close observation may be made of the results, and adequate publicity given to any conclusions.

The department believes that the antitrust laws made it illegal for medical societies or individual practitioners in the District of Columbia to obtain or retain for themselves a monopoly of the community's services, so long as adequate standards are maintained in the treatment of patients among those doctors who are willing to serve co-operative or among groups.

No Limitations

No combination or conspiracy can be allowed to limit a doctor's freedom to arrange his practice as he chooses, so long as by therapeutic standards his methods are approved and do not violate the law. Organized medicine should not be allowed to extend its necessary and proper control to include having to extend its necessary and proper control over standards having to do with the science and art of medicine, to include control over methods of payment for services involving the economic freedom and the welfare of consumers and the legal rights of individual doctors.

There should be free and fair competition between new forms of organization for medical service and older types of practice, without the use of organized coercion or illegal restraint on either side. If the newer forms of organization should result in inferior standards of therapy as is feared by their medical opponents, that fact can be revealed only by experiment.

It is hoped that this proceeding will lead to the cessation of such practices as have been alluded to above, with the result that there may be free and fair competition between the new forms or organization and the older types of practice.

When further legislation is desirable, and if so, its form may perhaps be indicated as a result of this investigation.

Thurman Arnold,
Assistant Attorney General.

Approved
Homer Cummings,
Attorney General.
July 30, 1938.

* * * *

The statement of Mr. Arnold has brought much comment from numerous newspapers and others throughout the country. Abstracts from some of them, as quoted by the *Journal of the American Medical Association,* follows:

CHICAGO TRIBUNE.—"A great many persons, including a substantial number of medical men, believe the doctors' societies have been too zealous in preserving the traditional professional relationship. It is not necessary to go into the merits of that controversy. The worst that can be said of the medical societies—and it has been said often—is that they have been following trade union practices. Members have been subjected to regulations which forbid them, under penalty of expulsion from their union, from freely contracting for their services.

"The American Medical Association, in short, is facing prosecution as a trade union. This is curious because trade unions are specifically exempt from the operations of the anti-trust laws. It is doubly curious because of all the trade unions ever known the medical association is the one which has been the least selfish, the most public spirited.

"There is no union scale for doctors. There are no union hours. The ablest medical men in every community give their services without pay to the poor as a matter of course. Few doctors are rich and many an able physician earns little more than a bare livelihood. Thanks largely to their trade union, the standards of training and competence in the profession have risen steadily with the years. Eight or ten years of strenuous study and apprenticeship are required before the doctor is permitted to earn a thin dime.

"But when the doctors in pursuit of an ideal of the proper relation of physician to patient have done no more than expel from their society members who refused to accept its rules of ethics, the medical association is haled into the courts almost as a common criminal.

"To earn the regard of this administration the American Medical Association should have ordered its members to accept no less than $10 for a call, cash in advance, and to refuse treatment except on those terms; should have picketed the offices of doctors who refused to accept its scale of wages and hours; should have brought in plug-uglies with baseball bats to wreck the laboratories of Group Health Association and brain anyone attempting to enter the place.

"The kind of trade unionism represented by the A. M. A., which establishes high professional standards for its members, continually raises those standards, publishes important scientific journals, and demands of every member that he put his patient's interest above his own is criminal in the Washington of 1938."

NEW YORK HERALD TRIBUNE.—"The Department of Justice, for all its excellences, is clearly not the appropriate agency for regulating American medicine. And if its new policy under Mr. Arnold is going to be bent to the uses of political strategem, it will cease to be gation: Group Health Association is a consumers co-operative organization whose members pay monthly dues; with the funds collected the association retains a staff of physicians and operates a clinic. The association has encountered opposition from the Medical Society of the District of Columbia and from the American Medical Association since its formation. The medical society's methods have already been outlined in the introductory portion of this statement. Typical examples of what has occurred may be given here.

Even before Group Health Association had begun operation of its clinic, the local medical society and the American Medical Association made public attacks upon the ethics of the association and upon its legality and its financial soundness.

At the same time the medical society began expulsion proceedings against the association's doctors; these proceedings were based upon charges of "unethical" conduct, although the doctors' only offense had been their willingness to serve the association. Expulsion of the association's doctors was sought not only from the Medical Society of the District of Columbia, but also from other medical societies affiliated with the American Medical Association in other parts of the nation.

The proceedings against one of the association's doctors were carried to a conclusion and the doctor was expelled. Proceedings against another doctor are still pending. An effort also was made to secure the expulsion of a Washington specialist who had disregarded the society's edict by engaging in professional relations with a Group Health Association doctor.

Striking Example

A striking example of the restrictions placed upon Group Health Association's doctors in securing consultations with other Washington physicians occurred in the case of a patient suffering from a serious heart ailment. The consulting specialist was instructed by an officer of the Medical Society that he could not consult with the attending physician. It was, therefore, necessary for the patient to see the specialist alone and for the specialist to communicate his conclusions to the Group Health Association doctor by correspondence. In other instances, Group Health Association checks have been rejected by Washington consultants because of fear of the Medical Society's attitude.

The close relationship existing between the medical society and the principal hospitals in Washington has resulted in denial to Group Health Association's physicians of access to hospital facilities in the District of Columbia. Not even in emergency cases are these doctors allowed to attend their patients. For example, an association member earning $1,440 a year recently telephoned the association's surgeon at midnight and reported that her husband had been taken to a Washington hospital with acute appendicitis, and requested that the surgeon come to the hospital immediately to take charge of the case.

Choice Defined

The hospital declined to permit the association surgeon to operate, notwithstanding the fact that the member had desired this surgeon's services and had paid for them through her membership in the association.

The member, therefore, was compelled to incur heavy surgical and hospital expenses that she would not have needed to contract for if the association had been permitted to carry out, without interference, its agreement with her. She also was denied the right to have the doctor of her own choice attend to the care.

Two — The Choice of Remedies

The evidence revealed by the present investigation appears to warrant submission to a grand jury for such action as that body may determine to be necessary. Such a course is in line with the ordinary practice of the department when it has information indicating that there have been violations of the criminal provisions of the law. As previously announced, the department feels that it cannot take the responsibility of declining to present to a grand jury evidence that the anti-trust laws have been violated whenever it has such evidence in its possession.

In the event that voluntary co-operation results in constructive proposals going beyond the elimination of illegal practices, the department will adhere to its previously announced policy of submitting such proposals to the court as a basis for a consent decree. The department's policy with respect to the concurrent use of civil and criminal proceedings has already been explained in detail in the statement relating to the prosecution of the auto finance companies, issued on May 18, 1938.

In instituting this proceeding, the Department of Justice again emphasizes that it is not deciding what are the proper methods of solving the problems of medical economics or indeed whether co-operative health associations have a place among those methods. It simply takes the position that monoply practices should not be employed to prevent what may be illuminating experiments in this field.

The Group Health Association seems to provide the opportunity for such an experiment, since it is composed of Government employes of general similarity of health, income and working conditions, and occupies a field in the that the individual practitioner, even though he devotes a portion of his time to charitable work, cannot supply all the medical needs of persons of low or moderate incomes.

Primarily this is not, of course, the fault of the doctor. It is a result of the low incomes of a large part of the community on the one hand, and of the increasing cost of adequate medical treatment on the other. The development of scientific apparatus, increasing specialization, and better standards of care, desirable as they are, have all contributed to this situation.

Recent studies by government technicians have brought out the fact that the forty million persons in the United States in families with annual incomes of less than $800 cannot pay for medical care, and in many cases do not receive it when they are in need of it.

For instance, at least half the present toll of mothers' deaths in childbearing, and of infants in the first month of life, are preventable with proper prenatal care and medical services in delivery. Half the babies born annually in this country are in families with less than $1,000 income a year. It is therefore significant that infant mortality is five times higher in families with less than $500 a year than it is in families with $3,000 or more a year.

Left Without Care

These facts are cited because experience has demonstrated the definite possibility of reducing infant mortality and of danger to mothers by proper care. The enormous difference in the records of low-income families is prima facie evidence that the medical profession as it is now organized is not providing them with adequate care.

Acute illness of all kinds increases as one goes down the income scale. It is 47 per cent more prevalent in families on relief than in those with $3,000 or more annual income. Chronic illnesses are 87 per cent more prevalent in relief families; non-relief families of less than $1,000 income have twice the illness disability of families with more than $1,000.

In any one year, 10 per cent of the families bear 41 per cent of the costs of illness. Another 32 per cent of the families bear 41 per cent of the costs, while the remaining 58 per cent of the families bear only 18 per cent of the costs.

Spreading Costs

The same family may not stay in the same sickness group year after year. The incidence of serious illness is extremely uneven, among persons of the same income. That is the reason advanced for co-operative methods of payment for medical care; by spreading service to all at the cost of a moderate and uniform charge to each.

This type of organization is already familiar in the United States in dealing with hospital charges, and has proved highly successful. Group hospital plans on a co-operative basis are in force in over sixty cities and cover more than 1,500,000 subscribers.

These facts make it amply clear that the medical profession's present effort to meet the problem of making its knowledge and skill generally available have not proved associations are primarily aimed to help families not on relief. Theirs is the most pressing medical problem today because they have not public funds and will not go to charity. Many studies of the problem, such as the report of the committee on costs of medical care, a research committee organized under a foundation grant, bring out the fact that the moderate income groups have peculiar difficulty in providing adequate medical service for themselves.

Available Clinics

The medically indigent in many localities have access to free clinics or charitable services by doctors, and their unsatisfied needs may be more amply filled than at present by expansion of private charity or governmental grants. But those with income enough to pay for some medical service either cannot avail themselves of these free facilities, or because of self respect, they do not desire to do so.

Such persons experience no difficulty when their medical needs are slight; but when serious illness strikes, or several members of the family require attention within a short time, the financial burden is excessive.

As has been stated above, these observations are made to put this proceeding in its proper setting. The Department of Justice is not in a position to decide whether or not co-operative health associations are a proper solution. Its function is rather to prevent artificial impediments by organized groups who desire to escape competition from the various attempts which may be made from time to time to bring down the cost of medical care.

Open Competition

The Sherman act is not a method of directing or planning the future; instead, it is a means of keeping a competitive situation open so that those who can offer services at less cost are not impeded by agreements, boycotts, blacklists, expulsions from societies,, or organized activities of any character. The economic conditions are surveyed not with an idea of planning a solution, but with the idea of keeping the situation free from restraint.

Case Under Probe

The circumstances of the case under investifrom selecting physicians of their own choice.

The department interprets the law as prohibiting combinations which prevent others from competing for services as well as goods.

The particular persons responsible for this violation can only be ascertained by a grand jury investigation. Such an investigation will be undertaken by the department in the near future.

The reasons for issuing this statement prior to the calling of a grand jury, follow the general policy heretofore announced. The two objectives of the antitrust laws are, first, to act as a deterrent and to provide a means of maintaining competitive conditions in the future. The second objective is a constructive aim which requires the co-operation of those concerned.

In obtaining this co-operation, the Department must avoid making surprise moves. It must warn those who are engaged in what the Department considers violations of the acts of its attitude toward such activities; and in fairness to them and for their own protection, it must do so as far in advance as possible. Such advance notice may also be useful in calling the attention of Congress to the Department's interpretation of the law so that possible amendments may be considered. Advance notice of a contemplated grand jury proceeding is not always possible.

Objectives Defined

Tactical reasons, in some cases, as to where it is feared that witnesses may be approached, may compel action without warning. These reasons, however, do not exist in a proceeding against men of the character of those engaged in the profession of medicine.

In obtaining the co-operation necessary to accomplish the Department's antitrust proceedings, it is necessary to put the prosecution in its proper setting. It is therefore important to repeat that an indictment for violation of the antitrust laws does not necessarily charge a crime involving moral turpitude.

Thus, in the present case, the Department does not take the view that the offenses committed are crimes which reflect upon the character of high standing of the persons who may be involved. The analogy to which this proceeding should be compared is that of a prosecution for reckless driving, committed by a person of distinction and good-will who is in a hurry to meet his legitimate engagements.

The absence of moral turpitude, however, does not lessen the duty of the Department to prosecute where it believes violations of the antitrust laws have occurred. This duty has been laid upon it by Congress. Congress has given it no right to use the distinction between malicious violations of the antitrust law and reckless or careless violations as a basis for its choice between civil and criminal procedure.

Congress has not indicated that the respectable character of the defendants or their achievements in other fields, is a consideration for the Department's action. Such matters are properly within its province in recommending the type of sentence, but not in recommending the type of prosecution.

No Alternative

As the Department has already announced, therefore, where evidence of violations of the antitrust laws exists, it has no alternative except to proceed before a grand jury, except in those cases where past acquiescence or other special considerations have made a criminal proceeding inequitable.

Those introductory observations are necessary because the policy of issuing statements of this character is still new. They are intended to survey the general problem of antitrust policy of which this suit is a part. Their purpose is to create an atmosphere which leaves the door open to a constructive proposal at any stage of the litigation. In order to accomplish this it is important to understand that many types of antitrust violations are in the nature of misdemeanors, and that the power of the course to determine the sentence offers ample opportunity to avoid undue and unjustified severity on any individual. With the above restatement of our general antitrust policy in mind, we may proceed to consider the particular problems relating to the practice of medicine which form the background of this proceeding.

Economic Conditions of Medical Practice

Although this proceeding concerns especially the District of Columbia, it is selected because its importance is nation-wide and its value as a precedent is of far-reaching consequence on one of our most pressing problems.

The illegal activities of organized medicine in this instance are typical of what has occurred in other cities throughout the country whenever co-operative health groups have been formed. In discussing the economic conditions of medicine which makes this suit of great importance, it is therefore appropriate to consider briefly some of the broader aspects of the national health problem.

Care For All

In spite of great technical proficiency, the medical profession has not been successful in furnishing adequate medical care to all the American people at a cost that they can afford to pay. Careful studies have demonstrated

Mississippi State Medical Association

Leon S. Lippincott, Vicksburg .... Editor
J. S. Bryan, Amory .... Associate Editor
Leslie V. Rush, Meridian .... Associate Editor

Papers and news material for publication should be received not later than the fifth of the month preceding publication.

The editors are not responsible for statements made by any contributor.

Manuscripts and all material for publication should be addressed to the editor, P. O. Drawer 231, Vicksburg, Mississippi.

EDITORIALS

DOES ORGANIZED MEDICINE VIOLATE

An editorial in the *Journal of the American Medical Association*, under date of August 6, 1938, and headed, "The Department of Justice Intervenes in Medical Care," calls attention to the fact that on July 31, Thurman W. Arnold, assistant attorney general of the Department of Justice of the United States, released a statement indicating that the Department of Justice proposes to prosecute the American Medical Association as a monopoly under the federal antitrust laws if a grand jury investigation to be made in the District of Columbia results in indictments against the American Medical Association, against the affiliated society in Washington, and against certain leaders of organized medicine.

Commenting, the editorial continues in part, "It becomes apparent from the quotations in the press that the Department of Justice feels that organized medicine should have nothing to say about methods of payment for medical services; it is even proposed that hospitals shall have nothing to say as to who may or may not practice within their walls."

And further, "Apparently it remains to be determined whether or not the federal administration can use the laws and the courts to mold the people of the United States to its beliefs in every phase of life and living, and whether or not fundamental principles of common justice which have prevailed in this country in the past are to be relegated to the limbo of forgotten things. Until the courts have spoken, physicians need have no fear as to the legality of the service which they render or as to the place which the American Medical Association occupies in our national economy."

Every doctor of Mississippi should read and study and consider well the statement by Mr. Arnold as published in the same number of the *Journal of the American Medical Association,* which follows:

Statement by Thurman Arnold, Assistant Attorney General, Department of Justice

The following is the announcement made by Thurman Arnold, assistant attorney general, in connection with the investigation of the medical profession.

A preliminary investigation made by the Department of Justice in response to numerous complaints has disclosed the following situation with reference to activities within the medical profession in the District of Columbia:

Group Health Association, Inc., was organized in the District of Columbia a year ago by 2,500 Government employes, principally from the lower salary classes, to provide prepaid medical care at a cost which the members could afford to pay. This group retained its own physicians, who have undertaken to provide the members with virtually complete medical care. The Medical Society of the District of Columbia, the American Medical Association, and some of the officials of both these organizations, are attempting to prevent this association from functioning.

METHODS USED

The methods they have used are:

1. Threatened expulsion from the District Medical Society of doctors who accept employment with Group Health Association. Because of the power and standing of the Medical Society, and the stigma sometimes attached to expulsion from it, this causes Group Health Association great difficulty in employing competent physicians.

2. Threatened expulsion from the Medical Society of doctors who take part in medical consultations with doctors on the Group Health Association staff. This in effect amounts to forcing members of the Medical Society to participate in an illegal boycott of Group Health Association doctors.

3. The exclusion from Washington hospitals of the Group Health Association staff doctors; this has been accomplished either in combination with the various hospitals or by means of influence, which may or may not have amounted to coercion, upon them. This exclusion has made it impossible for doctors affiliated with Group Health Association to practice their profession in the hospitals and it has prevented members of the association who enter the hospitals as patients from having the services of the physicians of their own choice.

SEE LAW VIOLATION

In the opinion of the Department of Justice, this is a violation of the antitrust laws because it is an attempt on the part of one group of physicians to prevent qualified doctors from carrying on their calling and to prevent members of Group Health Association ville, is the president and the secretary is Dr. A. H. Little, Oxford.

Dr. Howard Lea Cockerham Jr., son of Dr. and Mrs. H. L. Cockerham, Gunnison, has gone to Baltimore to be interne in the Bon Scours Hospital there following his graduation from Tulane's Medical School. He attended the University of Mississippi before going to Tulane.

MAKING A TOUCH: A fellow has to be a contortionist to get by these days. First of all, he's got to keep his back to the wall and his ear to the ground. He's expected to put his shoulder to the wheel, his nose to the grindstone, keep a level head, and both feet on the ground. And, at the same time, look for the silver lining with his head in the clouds.—Exchange.

No man can live happily who regards himself alone, who turns everything to his own advantage. Thou must live for another if thou wishest to live for thyself.—Seneca.

Drs. O. C. Brewer, Robinsonville, A. V. Richmond, Lake Cormorant, A. L. Emerson and J. M. Wright, the latter two of Hernando, were in Memphis recently on business and pleasure.

Dr. H. M. Wadsworth, Hernando, was a party to an automobile wreck recently. Fortunately the doctor escaped serious injury. Mrs. Wadsworth and Henry Manley, Jr., are visiting in New Orleans, her former home.

Dr. J. A. Rhodes, Horn Lake, reports Mrs. Rhodes much better after a rather severe attack of illness. We hope to have the doctor's autobiography in our next issue as well as others in later issues.

Your editor's son, Lancelot, is home from the University of Virginia and has entered the service of the Union and Planters National Bank and Trust Company, Memphis; our daughter, Sallie Starre, has been with the Memphis branch of the Federal Reserve Bank for several years.

Mark Twain's statement about the weather still holds good, "Everybody is talking but no one doing anything about it."

How did our forefathers do without screens, concrete roads, refrigeration, electrical appliances, air conditioning and many other conveniences? Our elders, however, often speak of and wish for "the good old times" of their youth.

Rt. 4, Memphis, Tenn. L. L. Minor
August 7, 1938. County Editor.

HUMPHREYS COUNTY

Of widespread interest throughout the state is the announcement of Miss Irene Waddlington's engagement to Mr. Carey Fuller, Indianola. She is the only daughter of Dr. and Mrs. James Augustus Waddlington, Belzoni. The wedding will be solemnized in the home at 8:45 a. m., August 15. The newly-weds will reside in Mulberry, Fla.

Mrs. Ida Bounds, Winona, spent several days with her sister, Mrs. W. S. Taylor, Isola, last month. While in the Delta she and Mrs. Taylor visited one day in Ruleville with relatives.

Dr. Thomas Royce of Ole Miss is spending a few days with his parents in Isola.

Dr. and Mrs. W. A. D. James, Midnight, met Mrs. Leon Bass in Jackson on her return from Bristol, Va. Mrs. Bass is a sister of Mrs. James.

Humphreys County venereal clinics for treating syphilis have been conducted for five weeks. Interest shown by physicians and patients seems to be entirely satisfactory as to treating the disease. Negroes in many instances are evidencing a surprising degree of desire to become informed concerning syphilis instead of "bad blood," which is meaningless to them. Still the large majority has the impression that only a blood test is necessary as a guide to treatment. Responsibility for such ignorance rests entirely with the physician and with certain "smart", usually white, advisors. It is hoped that all physicians will take seriously the complete examinations of their patients before they are given orders for treatment. Records provided at the health office and filed there, outline all that is necessary for information concerning the average age case as to examination, classification of stage of syphilis recommendations of therapy are close of drug, and remarks and progress notes. Also every patient should be weighed, temperature, pulse rate, and blood pressure taken and urine examined for at least albumen at weekly or monthly intervals so as to individualize with some measure of safety his progress. Dashes and blanks on these records where information should be recorded are inexcusable, and will sooner or later be a boomerang to those who fail to conscientiously examine or fail to record findings and symptomatology.

Belzoni, J. W. Jackson,
Aug. 9, 1938. County Editor.

LEFLORE COUNTY

Miss Dorothy Dickins, State College, and Miss Marion Dickins, Greenwood, daughters of Dr. and Mrs. W. B. Dickins, returned July 2 from a trip to Mexico City. On July 4 they went over to Monticello, Ark., with Mrs. W. B. Dickins and Mr. Stokes Dickins to spend the day with Dr. and Mrs. Robert Dickins.

Sunday, July 3, Mr. and Mrs. John Dickins, and daughter, Dell, Leland, spent the day in Greenwood.

At the regular staff meeting of the Greenwood Leflore Hospital on July 7. Dr. R. E. Wilson reported the death of a child with influenza, meningitis, and Dr. R. B. Yates reported a death of an old man with cardiorenal disease. Quite an addition has been added to the hospital; in the basement a new laundry, new laboratory, new class rooms and storage rooms. Florence Hawkins has been appointed housekeeper.

Dr. and Mrs. Tate Carl, Memphis, were visitors in the home of Mr. and Mrs. A. S. Carl, July 12.

Dr. and Mrs. D. T. Sayle, Highlandale, announce the marriage of their daughter, Olivette, to Mr. Sam C. Mims, III, Grenada, at Lexington, June 22. They will live in Greenwood.

Mrs. J. F. Lucas and children, Joanne and John Fair, spent three weeks on the Mississippi Coast.

Mrs. L. B. Otken and children, and Mrs. J. C. Adams and children also spent a week on the Mississippi Coast. Dr. and Mrs. J. C. Pegues spent their vacation visiting on the Georgia Coast at Savannah, Ga. Dr. and Mrs. F. M. Sandifer spent a few days in Memphis, Tenn.

Dr. A. Macon, formerly of Charleston, now of Louisville, Ky., visited relatives in Greenwood July 20.

Dr. R. A. Kimbrough formerly of Charleston, now of Philadelphia, Pa., had the honor of delivering Franklin D. Roosevelt III, in a Philadelphia hospital July 20.

Dr. Bostick, Indianola, was a recent visitor to Greenwood.

Dr. George Baskerville, Greenwood, visited relatives in Alexandria, La., July 23 and 24.

Drs. M. E. Lapham, director of the Division of Medical Extension of Tulane University, New Orleans, La., and H. B. Cottrell, supervisor of Field Unit of State Board of Health, Jackson, visited in Greenwood July 29.

Dr. and Mrs. W. E. Denman, Greenwood, have gone to Arkansas for a few days' visit.

Greenwood, W. B. Dickins,
August 1, 1938. County Editor.

WINSTON COUNTY

Dr. W. W. Parkes made a business trip to Jackson last week.

Dr. T. C. Suttle has returned from Chicago, having taken review work on eye, ear, nose and throat diseases.

Dr. S. W. Pearson is in a Meridian hospital with an acute ankle; we are not informed the nature of the trouble.

Dr. W. B. Hickman is taking review work on childhood and infant diseases in Atlanta, Georgia.

Mr. A. J. Adams, a brother-in-law of the writer, has spent some time in a hospital with thrombophlebitis. His condition is apparently better but he has been in a critical condition.

Drs. L. T. Parks and C. A. Kirk were in the city this week.

Louisville, M. L. Montgomery,
August 6, 1938. County Editor.

DR. O. L. BAILEY

Dr. O. L. Bailey, 68 years old, native of Newton County and resident of Ocean Springs since 1897, died July 19 at his home. He had been confined to his bed only three weeks, but health began to fail three months ago. Members of the Coast Medical Society were honorary pallbearers at the funeral.

Dr. Bailey went to Ocean Springs a young physician of 27, faced with a yellow fever epidemic which caused the town to be quarantined. He is credited with having done heroic work and within a short time won the confidence and respect of the entire community. In 1905, the Ocean Springs State Bank was established and he was named its president, an office which he held until his death, being the second longest continuous bank president in service in the State of Mississippi. With his daughter, Miss Beryl Bailey, he conducted Bailey's Drug Store. Dr. Bailey was a L. & N. Railroad physician for 40 years and was medical examiner for a number of insurance companies.

He was a member of the local Presbyterian church, a Scottish Rite Mason and Shriner, a charter member of the local Rotary Club, and a member of the Coast, State and American Medical Associations.

He leaves a wife, four children, three sisters, and five grandchildren.

He will be missed.

SOUTHERN TUBERCULOSIS CONFERENCE AND SOUTHERN SANATORIUM ASSOCIATION

A joint meeting of the Southern Tuberculosis Conference and the Southern Sanatorium Association will be held at the Brown Hotel, Louisville, Kentucky, September 19, 20, 21, 1938. The preliminary program shows planned presentations of great importance to all interested in tuberculosis and a number of outstanding and well-known speakers, including Paul A. Turner, M.D., Louisville, Kentucky; Julian A. Moore, M.D., Asheville, North Carolina; Andrew L. Banyai, M.D., Wauwatosa, Wisconsin; Oscar O. Miller, M.D., Louisville, Kentucky; Porter Vinson, M.D., Richmond, Virginia; V. K. Hart, M.D., Charlotte, North Carolina; O. L. Ballard, M.D., Louisville, Kentucky; Hugh A. Brown, M.D., Alexander, Arkansas; Carl Puckett, M.D., Oklahoma City, Oklahoma; C. L. Newcomb, National Tuberculosis Association; Mrs. Ashley Halsey, Charleston, South Carolina; Mrs. Ruth Terrell, Louisville, Kentucky; Miss Gladys Malcolm, Jacksonville, Florida; Mrs. C. B. McDonald, Columbia, South Carolina; Mrs. Florence Breed, National Tuberculosis Association; Miss Isabell McCaffrey, National Tuberculosis Association; K. W. Grimley, Birmingham, Alabama; H. G. Reynolds, M.D., President, Kentucky State Medical Association, Paducah, Kentucky; Chesley Bush, M.D., President, National Tuberculosis Association, Livermore, California; A. T. McCormack, M.D., President, American Public Health Association, Louisville, Kentucky; H. McLeod Riggins, M.D., New York, New York; W. C. Blake, M.D., Tampa, Florida; Frank H. Carman, M.D., Dallas, Texas; Champneys Holmes, M.D., Atlanta, Georgia; John Alexander, M.D., Ann Àrbor, Michigan; Herbert Acuff, M.D., Knoxville, Tennessee; Miriam Bailey, M.D., Baltimore, Maryland; David Lesesne Smith, Spartanburg, South Carolina; Mrs. E. R. Gant, Washington, D. C.; W. A. Doppler, Ph.D., National Tuberculosis Association; R. L. Carlton, M.D., Winston-Salem, North Carolina; Miss Fannie B. Shaw, Atlanta, Georgia; Miss Erle Chambers, Little Rock, Arkansas; F. P. Baker, M.D., Talahina, Oklahoma; Mrs. J. C. Wilson, Sheridan, Arkansas; Miss Nora Spencer Hamner, R.N., Richmond, Virginia; E. C. Harper, M.D., Richmond, Virginia; P. P. McCain, M.D., Sanatorium, North Carolina; Frederick T. Lord, M.D., Boston, Massachusetts; J. Burns Amberson, M. D., New York, New York; Paul H. Ringer, President, Southern Tuberculosis Conference, Asheville, North Carolina; J. D. Riley, M.D., President, Southern Sanatorium Association, Booneville, Arkansas; Bruce Douglas, M.D., President, American Sanatorium Association, Detroit, Michigan; Irvin Abel, M.D., President, American Medical Association, Louisville, Kentucky; W. Atmas Smith, M.D., Charleston, South Carolina; Walter E. Vest, M.D., Huntington, West Virginia; Miss Clara Pennington, Fort Worth, Texas; R. A. Brown, M.D., New Orleans, Louisiana; Kendall Emerson, M.D., Managing Director, National Tuberculosis Association: C. Howard Marcy, M.D., Pittsburgh, Pennsylvania; Charles D. Cawood, M.D., Lexington, Kentucky; Paul A. Yoder, M.D., Winston-Salem, North Carolina; Lewis J. Moorman, M.D., Oklahoma City, Oklahoma; Thomas B. McNeeley, M.D., United States Public Health Service, Washington, D. C.; Paul B. Cornelly, M.D., Washington, D.C.; C. St. C. Guild, Director of Tuberculosis Among Negroes, National Tuberculosis Association, New York.

INTERPRETING MEDICAL LITERATURE
PUBLIC HEALTH

Felix J. Underwood, M. D., Jackson

Rocky Mountain Spotted Fever. — Public Health Report, Brock Hampton and Harry G. Eubank (June 17) 1938, pps. 984-991.—Rocky Mountain spotted fever is most prevalent in northwest mountainous sections of the United States and in the South Atlantic States, but occurs over the entire country. The greatest incidence of the disease is during the spring and summer months. It is transmitted to human beings by the bite of the wood tick in the western areas and by a variant of the species, the common dog tick, in eastern areas.

The incubation period of Rocky Mountain spotted fever is ordinarily two to five days; in milder cases it may be as much as two weeks. The symptoms at the onset are not unlike those of other acute infections, beginning with a chill, followed by headache, sweating, redness of eyes, pain in the abdomen, the bones, the muscles and sometimes nose fluid and vomiting. In senile cases the patient may become delirious and present meningeal symptoms.

The more characteristic symptom of the disease is that of the rash which is most often seen on the wrist, ankles, and sometimes on the back. This rash gives a mottled appearance and in severe cases may be purplish-red due to a release of blood into these areas. The laboratory will usually enable the physician to differentiate the disease from other exanthema.

The case fatality is high, averaging almost one death for five cases during the five years 1933-37 in sections where there was a high endemic incidence.

The prevention of the disease is not easy but much may be done. Those who must go into the woods and underbrush, in tick infested areas, for cause of occupation or because of their love for the out-of-doors, should select clothes which will protect them from ticks. High boots, puttees, leggings, and socks may be worn over the trouser legs. Ticks crawling on the outside of the clothing or ticks becoming attached to the skin may be removed with tweezers. There seems to be no material that can be placed on the skin or clothing which will repel the ticks.

The Public Health Service has developed and prepares a vaccine which offers considerable protection against the disease. This is recommended for those who frequent woods heavily infested with ticks. An attack of the disease confers a high degree of immunity.

August 1, 1938.

PEDIATRICS

Harvey F. Garrison, Jackson

Nutritional Heart Disease in Children. — Waring, J. I.,American Journal of Diseases of Children 55:750 (April) 1938.—"Heart disease in children is not encountered as frequently in Charleston as it is in places with colder climates. In the past nine years there have been recorded only 43 cases in a small but active pediatric service at Roper Hospital. Of these, in four cases the condition was classified as congenital, in 25 cases as rheumatic and in 13 cases as nutritional. Hence, in this locality cardiac disturbances of nutritional origin are relatively important and by no means rare."

In the cases considered "there the diagnosis of nutritional heart disease was made on the basis of the following conditions: cardiac enlargement, shown by percussion and by roentgen examination, without accompanying murmur; negative results of urinalyses; absence or sluggishness of reflexes; a history of deficient diet, and more or less rapid response to rest and sufficient food. Dietetic histories in most cases were vague, but malnutrition was generally evident. The level of the serum protein was not used as a criterion, since the findings in this series were not consistent.

"The 13 cases were children whose ages varied from 14 to 48 months and averaged 25 months. Only one was white. This contrasts with the figures for the 25 patients with rheumatic cardiac disease, whose ages ranged from 3 to 12 years and averaged 9 years. The latter group included only seven negro children.

"The cause of this cardiac enlargement does not appear in these cases. Whether deficiency of Vitamin B_1, deficiency of protein or general dietetic deficiency is the fundamental cause is still a matter of some disagreement. The accumulated evidence appears to be conflicting. General retardation of growth in infancy produces a heart and a thoracic cavity smaller than normal. The heart is said to enlarge in scurvy, and possibly rickets as well as in beriberi, and in beriberi it is said to return quickly to normal size when Vitamin B_1 is given. In this series of cases the rapid reduction in size has not always been apparent. The increase in size is said to be due to edema of the cardiac muscles rather than to true hypertrophy and the electrocardiogram is said to be normal except as the conduction time is shortened. In pellagra the heart is normal or subnormal in size and showed no electrocardiographic changes. In deficiency of Vitamin B_1 as manifested in the rat, there is a distinct bradycardia. This phenomenon did not appear in the cases considered here. In all of them pulse rates were high, varying from 100 to 150 a minute, nor was there any remarkable change when the patients improved clinically."

"In this small series of cases scurvy was not evident and rickets was not apparently active. In some of the cases of the size of the enlarged heart decreased fairly rapidly though as a rule not as fast as the general edema disappeared, and in some cases the enlargement persisted for weeks or longer. This fact would suggest that the enlargement was sometimes due to some factor other than ordinary edema of the cardiac muscles, perhaps to hypertrophy which gradually subsides or perhaps even to some process which left more or less permanent cardiac damages.

"In only three of the eight cases in which the protein content of the blood measured was there marked variation from normal levels.

"All these patients improved on adequate diets strengthened with materials rich in vitamin B_1, such as brewer's yeast, wheat germ sugar and extract of rice polishings."

In addition to the cases of cardiac disorder mentioned, 34 cases of nutritional edema without evident cardiac disease were collected during the same period. None of the patients showed clinical enlargement of the heart, and none of the 15 patients who had roentgen examination varied from the normal. These children had the same history of the scanty diet and their conditions ran the same general course as that of most cardiac patients. Their ages, with a few exceptions fell into the same period as the ages of the cardiac patients. Undoubtedly, some of them had cardiac changes which were not demonstrated. The reflexes were absent in 11 cases. The findings in regard to serum proteins were good, bad or indifferent. This fact suggests that some of these patients had essentially a deficiency of vitamin B_1 and some of them a general and combined deficiency of dietary materials, and also protein.

"It is interesting to note that 83 per cent of the patients with nutritional disturbances were admitted to the hospital during the eight months from August to March inclusive, and that only 17 per cent came in during the four months from April to July, inclusive, when dietetic matreials are perhaps more varied and more available in this locality."

It appears in this series "that the cardiac changes are due not entirely to a lack of Vitamin B_1 but to a rather more general deficiency of dietary materials and that a satisfactory response to dietetic treatment may be expected in cases in which the illness is not too far advanced."

August 6, 1938.

ORTHOPEDICS

Thomas H. Blake, Jackson

Tibia and Fibula Lengthening by the Turn Buckle Method.—Alcorn, F. A.: Surg., Gynec., and Abst. (Aug.) 1938.—The author in this article describes the method used in leg lengthening operations in the Nebraska Orthopedic Hospital. Thirty-seven leg lengthening operations have been done since the latter part of 1932. The procedure consists of placing a Steinmann pin through the osalsis, and then an incision is made just medial or lateral to the crest of the tibia and the bone is split longitudinally so that there is somewhat of a Z-shape incision crossing the bone. The fibula is also severed through a different incision. The wounds are then closed. Pins are passed through the upper and lower fragments of the tibia and a cast applied, the pins being included in the cast. A circular incision is made about the cast at about the level of the operation. Turn buckles, three in number, are then applied to the cast so that by turning these the leg can be lengthened. About one and one-half to two and one-quarter inches is the maximum length that can be obtained.

This operation is only to be used in rare instances, and except for the cosmetic effect, the results are not very satisfactory, because it is always done on a leg which has a previous handicap resulting in a shortening either from trauma, maldevelopment or bone disease. This operation is not to be encouraged and in all probability it is a safer procedure to block the epiphysis of the opposite extremity stopping growth on that side allowing the under-developed leg to increase in length at a more rapid rate than the opposite, or the normal leg may be shortened to equalize the two extremities. A leg that is handicapped by weakness and under-development will have an additional handicap when the leg lengthening operation has been added. Its appearance will be improved, but its usefulness and strength will be lessened.

March Fracture.—Myerding and Pollock, George, A.: Surg., Gynec., Obst. (Aug.) 1938. —The authors very thoroughly review the literature on this peculiar foot ailment which consists of a spontaneous fracture of the shaft of the first, second or third metatarsal without apparent sufficient cause. Most of the literature on this subject is from Europe where it is found rather commonly among soldiers. The symptoms are without apparent reason or cause. The dorsum of the foot becomes swollen and painful and about three weeks later the x-ray would reveal the fracture of the metatarsal. It is impossible to account for this disorder unless it is from underdeveloped feet, overweight for the foot structure, or abnormal footwear. Many reasons have been brought forward for this disorder, but none is definitely satisfactory. The author reports ten cases, most of which are found in women, all of which made an uneventful recovery with the proper rest.

The abstractor wrote an article on this subject published in the Journal of Bone and Joint Surgery, 1933, in which eleven cases were reported. Any individual complaining of a painful swollen foot should be given the benefit of x-rays at weekly intervals to rule out this disorder, as the fracture is slow in developing and is quite painful. The treatment is rest, heat and splinting.

Osteolytic Osteogenic Sarcoma With a Report of Eight Five-Year Survivals.—McReynolds, I. S.: Surg., Gynec. Obst. (Aug.) 1938.—The author of this article describes osteolytic type of osteogenic sarcoma of bone. We all know that this is one of the most malignant of tumors. He mentions that of 131 cases, eight have survived a five-year period. It is brought out in this article that in each instance these were atypical cases from one standpoint or another, and in every case the treatment eventually used was radical amputation. There have been many attempts at excision and various other treatments for bone tumors, but once a diagnosis of malignancy has been definitely established, the only treatment that has proved successful is amputation well above the involved area, and preferably, through an uninvolved bone, as very frequently the tumor is visible in one portion of the bone yet there will be cell deposits not visible in the opposite end which appears in every manner to be normal. From the pathological standpoint, the tissue study of these cases shows no particular structure variation from the sections found in those cases which were more violently malignant and a rapid death followed, so that from a pathological standpoint, it is impossible to separate the tumors of the highly malignant type and those less fatal.

The treatment of choice in bone sarcoma is still that of radical amputation as soon as possible after the diagnosis is made.

August 13, 1938.

Eye Changes in the Management of Hypertensive Toxemia of Pregnancy.—Hallum, Alton V., So. M. J., p. 64 (Jan.) 1938.—This five-year study of over 300 patients is carefully detailed, and represents an unusually large amount of investigation. It is the essayist's experience that the study of the eyegrounds, when properly correlated with the other signs and symptoms of toxemia, is the most consistently reliable single guide in determining when pregnancy should be terminated. The fundal changes are described. First, there is a slight generalized constricton or narrowing of a single artery or branch, or of all the retinal arteries. Often, however, the first change noted is a single constriction or a series of constrictions, usually in the larger branches of the retinal artery. As the severity of the toxemia increases the degree of arterial constriction, both general and local, becomes more marked. These arterial constrictions are spastic in nature, and there are no exaggerations of the arterial reflex stripe, and no arterio-venous compression. The normal ratio of vein diameter to artery diameter is roughly 3 to 2; but this ratio increases in proportion to the severity of the toxemia and hypertension until in the extremely toxic case the ratio may be as high as 5 or 6 to 1, together with localized variations in caliber. The second change to appear is edema of the retina, and it makes its first appearance at the upper and lower poles of the disc and spreads out along the course of the retinal vessels. When well established the retina appears swollen, fluffy, grayish or milky in color, and tends to envelop the retinal vessels. The final and most serious fundus change is the appearance of hemorrhages and exudates. The hemorrhages are usually in the superficial nerve fiber layer and are therefore flame-shaped. They are usually situated near a vessel and are usually in the posterior third of the fundus, just in the same distribution of the individual cotton-wool exudates.

When the toxemia is allowed to progress to the stage where retinitis is produced, it is most likely that permanent vascular and renal damage has been done. If nephritis is allowed to develop during pregnancy, it probably means that the mother's life has been shortened by several years.

When hypertension or other evidence of toxemia develops during pregnancy a frequent examination of the fundus oculi should be made, and when in spite of conservative medical treatment the eyeground changes continue to become more severe, abortion should be done. This is especially true early in pregnancy, for there is only one chance of five in obtaining a live baby, and severe damage to the mother's cardiovasculorenal system will result if pregnancy is allowed to continue.

Pregnancy should be terminated before retinitis appears, surely as soon as the first hemorrhage or exudate is seen.

Retinal Changes in Hypertensive Toxemia of Pregnancy.—Schultz, J. F., and O'Brien, Am. J. Ophth., p. 767 (July) 1938.—This report is a further study along similar lines to the above abstract. These investigators found that the retinal changes, paralleling neither the albuminuria nor the edema, followed closely the severity of the hypertension, and therefore of the toxemia: in those with normal fundi, the average blood pressure was 165/109; those with spasm of the retinal arterioles showed an average blood pressure of 170/108; in the group with angiosclerosis the average blood pressure was 181/118; and those with retinitis had an average pressure of 199/137.

Their patients who had retinitis almost invariably showed an increase in the number and extent of the retinal lesions for a few days following delivery. Yet, a few days after delivery, the edema had disappeared and the homorrhages and areas of cytoid degeneration had lessened in size or vanished.

Discussion: The reviewer recently saw a white primipara, age 26, who had severe toxemia, the blood pressure averaging 195/130. During the day of delivery she stated that she was unable to see, and examination of her fundi showed marked retinal changes. There were many flame-shaped hemorrhages, as well as cytoid areas of degeneration. Her vision was reduced to counting fingers at close distances and because of the severity of the condition, it was believed that very little vision would return. Labor followed soon after the ocular examination, and it was not unusually difficult; a viable infant was delivered; her case was followed closely during the six months that have elapsed; the hemorrhages were absorbed in part within the first few weeks, and now, although there is still great evidence that marked changes have occurred, the visual acuity is 20/20 in each eye.

This one case serves but to emphasize the findings of the two investigations reviewed above, and it is heartening to find that obstetricians, and not ophthalmologists alone, are stressing more and more the value of the ophthalmoscope in toxemia of pregnancy.

August 12, 1938.

SURGERY

A. Street, Vicksburg

Sulfanilamide in Treatment of Gas Gangrene.—George W. Fuller, and J. M. Kellum: *The Southern Surgeon,* 7, 305 (Aug.) 1938.—The authors report two cases of gas gangrene that had been treated by proper surgery and mixed serum. In spite of this treatment, temperature was high and gangrene extending. Both patients showed fall in temperature and improvement within twelve hours following the institution of therapy consisting of prontosil, 20 c.c. every four hours for six doses, and sulfanilamide, grains 20, every four hours for two days. While no proof is presented that the prontosil and sulfanilamide therapy was responsible for the improvement, the authors feel very strongly that the drugs were partially responsible.

Comment: It is to be hoped that sulfanilamide therapy will prove to be of value in the treatment of gas gangrene, but, so far as we know now, good surgery is the most dependable method of treating this condition. Serotherapy should be used only as an adjunct to surgery, and the same may be said for chemotherapy. Drs. Fuller and Kellum resorted to sulfanilamide administration, not as the only treatment, but used it in addition to thorough surgical procedures.

Modified Double Enterostomy (Mikulicz) in Radical Surgical Treatment of Intussusception in Children.—Barnes Woodhall: *Archives of Surgery,* 36, 989 (June) 1938.—Various surgical procedures designed for relief of gangrenous intussusception are reviewed. It is stated that the optimal surgical technique should insure: (1) rapidity of execution; (2) complete removal of the irreducible gangrenous bowel; (3) control of the concomitant intestinal obstruction; (4) control of the fluid loss; and (5) restoration of continuity of the intestinal canal.

Of 76 cases treated on the surgical service of the Johns Hopkins Hospital among infants of two years or less, resection was required and done on six patients, and the mortality was 50%. The operation of choice consisted of mobilizing and exteriorizing the involved portion of intestine according to the Mikulicz technique.

The author reports two cases of intussusception and gangrene that he operated upon using the exteriorization method with the addition of ileocolostomy, just proximal to the exit of the double-barreled enterostomy from the abdomen. The abdominal wall was then closed about the two limbs of the exteriorized loop, the two limbs were clamped and the loop removed with the cautery. The clamps were left on, but ileostomy could be easily established by removing the clamp from the end of the ileum.

The addition of the ileocolostomy was suggested by Dr. Dean Lewis, and its principal advantage is the prompt establishment of intestinal continuity and consequent avoidance of fluid loss through the enterostomy. The two cases reported recovered.

Comment: The reviewer agrees with the author's statement covering the five points desirable for optimal surgical technique in performing bowel resection for irreducible or gangrenous intussusception in children. However, no mention is made of infection and peritonitis. One advantage of the Mikulicz technique is that opening the intestinal lumen, while operating within the peritoneal cavity, is entirely avoided, thus preventing any peritoneal soiling. I do not see how ileocolostomy could be performed without considerable additional risk from peritonitis, the result of opening the colon within the peritoneum. Infants do not tolerate peritoneal contamination so well as adults. On the other hand, the prompt establishment of continuity of the intestinal canal would be very desirable.

The Early and Late Treatment of Burns in Children.—Donald W. MacCollum, *American Journal of Surgery,* 39, 275 (February) 1938.—During the seven-year period ending January 1, 1937, there were 461 patients seen at the Children's Hospital of Boston for fresh burns or late results of burns. There were 302 patients with burns mild enough to permit their treatment in the Out-Patient Department. 115 patients with fresh severe burns were admitted to the hospital. Only 2 of this group died, yielding a mortality rate of 1.7%.

It has been stated that if 33-1/3% of the body surface of an adult is burned, death will ensue. It is thought that a somewhat smaller area may predispose to fatality in children than in the adult.

The child with a fresh burn invariably shows some degree of shock. This results from fright and pain. When the burn is extensive, this initial shock may progress to a deeper and fatal stage, unless combatted. This deep shock is caused by pain insufficiently relieved, exposure and possibly by dilatation of the visceral blood system. It should be treated by sedatives, warmth, and cardiac stimulants if necessary. Transfusion is contraindicated in this initial shock stage unless there has been blood loss. Giving of intravenous saline and glucose is advocated.

After 24 hours, blebs begin to break and discharge large amounts of body fluid. With this fluid loss, there is a tendency to high fever, rapid pulse, restlessness and, finally, coma. During this stage, the blood will show anhydremia. Intravenous infusion of large amounts of saline and glucose are indicated to combat the anhydremia. If, after a few days of this treatment, the patient becomes edematous and shows low plasma protein, transfusion is indicated in order to build up the plasma protein.

After the shock has been combatted, local treatment of the burn is instituted. Some type of household grease has usually been applied for relief of pain before medical aid was obtained. This must be removed and the burned surface properly cleansed, removing devitalized tissue, if sepsis is to be prevented. The pain of this debridement may send the child back into shock, and it has been found wise to give gas-ether anaesthesia for the debridement. Under anaesthesia, the burn is scrubbed thoroughly with sponges soaked in green soap and hydrogen peroxide. This is followed by lavage with alcohol and hexylresorcinol. All blisters are broken and superficial dead skin removed. The patient is then put in a sterile bed with a heated cradle over him.

Various methods of dealing with the burned surface are described. At Children's Hospital, the most successful methods have been found to be either the tannic acid or the tannic acid-silver nitrate method. The tannic acid method consists of applying tannic acid solution either by spray or daubing the solution on with gauze pledgets until a good eschar is formed. The solution has been used as weak as 2½% and as strong as 40%. The strong solution will form an eschar quickly, the weak solution slowly. After the eschar is formed, the patient may move about in the bed and is usually quite comfortable. If silver nitrate is to be used, the burn is debrided as usual. 5% tannic acid is applied until light tanning is obtained, and this is immediately followed by the application of 10% silver nitrate. A firm eschar is formed within a few minutes. If the burn was superficial enough to leave islands of skin, epitheliazation will proceed beneath the eschar, and it will gradually loosen. If the entire skin was destroyed, the eschar will lie on a bed of granulation tissue. This area should be covered with an appropriate type of skin graft on removal of the eschar.

If the patient is not seen until after some time when infection has already set in, it is not advisable to attempt removal of crusts and dead skin, as described for fresh burns. The crusts may be soaked off with wet dressings of boric or Dakin solution.

The treatment of unhealed burns is described. Granulating areas are cleaned as thoroughly as possible, using wet dressings of boric acid, hypertonic saline, or antiseptic dressings, and the surface is kept flat by the use of pressure dressings. The simplest type of graft is the pinch graft, and this can be used with the least amount of shock to the patient, but leaves a rather unsightly scar and a less pliable scar than some other types of graft. The Ollier-Thiersch graft leaves a better and more slightly scar, but is more difficult and the take is not so sure. Razor grafts (Thiersch) will take if placed directly on top of granulations that have been cleansed but not excised, but the take is surer if the granulations have been removed and the deep scar excised. Excision of the deep scar also avoids late contraction. Patients that have already developed deformity from contraction are treated by various plastic procedures. It may be necessary to supplement these plastic operations by the use of razor grafts, pedicle flaps, or the tubed pedicle graft.

August 10, 1938.

RADIOLOGY

J. A. Beals, Greenville

Enteric Coating; A Clinical Investigation.—Many substances are used for the enteric coating of drugs that are intended to pass unaffected through the stomach, to be absorbed only when they have reached the small intestine. It is well known that in many cases these coatings fail to resist the gastric juices, or else fail entirely to disintegrate and liberate the enclosed drug within the intestine. H. W. Cran and M. Wruble, of Kalamazoo, Mich., report on a method for following enteric coated capsules and tablets of barium sulphate through the intestinal tract by means of repeated fluoroscopic and x-ray film observations. With this method they have established the very satisfactory behavior of a new, as yet unmarketed, enteric coating which, in a group of 54 individuals, allowed passage of the apoque drug through the stomach, and disintegration within the small bowel of at least 85 per cent of all the tablets or capsules swallowed.

Irradiation Sickness.—This distressing condition frequently results from the administration of heavy or prolonged doses of therapeutic irradiation, as in the treatment of cervical cancer by radium, and during the treatment of various cancer processes, especially within the abdomen, by high voltage x-rays. The cause has never been fully explained and no effective remedy has ever been devised, although several proposals have been advocated with enthusiasm from time to time. The intense nausea and vomiting can be controlled to some extent by the use of the barbiturates. In some cases saline and fluids may have to be replenished by intravenous administration.

C. L. Martin and W. H. Moursund, of Dallas, Radiology, March, 1938, have now used vitamin B. in large doses, in over fifty cases, with exceptional success in preventing the symptoms of irradiation sickness. They feel that the symptoms of radiation sickness are due to deficiency of vitamin B_1 which is in some way destroyed or inactivated within the body by the x-rays. This vitamin is now available in standardized units. The authors begin two days before treatment and continue throughout the period of treatment, giving daily doses by mouth of 2,000 international units. The effective prevention of symptoms was most noticeable in 10 cases that received irradiation of the upper abdomen where nausea and vomiting are to be expected regularly under ordinary conditions of treatment.

May 28, 1938.

STATE BOARD OF HEALTH

Of much interest in recent weeks have been studies of statistical trends made by various staff members of the Board of Health.

One detailed study by Mr. H. A. Kroeze, Director of Sanitary Engineering, reveals that in contrast to the marked decline from communicable diseases during the past twenty-three years, deaths from diseases of middle age have swerved upward at such an alarming rate that there is every indication of an increased death rate within the next decade.

"Great progress has been made in reducing the toll of death from typhoid fever, diphtheria, smallpox, yellow fever, and tuberculosis," Mr. Kroeze states, "and while there is still room for much improvement in controlling tuberculosis, syphilis, and certain other communicable diseases, graphs show that the declining death line on communicable diseases as a whole is now straightening out, whereas death rates from heart disease, cancer, nephritis and other chronic diseases are mounting at a staggering pace."

"It is going to take greater effort of health workers and physicians to maintain the gains we have already made in communicable disease control," Mr. Kroeze says, "while at the same time something must be done about the enormous loss of life in the upper age brackets of life."

A statistical survey made by Dr. George E. Riley, assistant director of preventable disease control, shows that malaria mortality is due for an increase this year and next, following its usual cyclic trend.

"Statistics indicate that malaria follows a six-year cycle," Doctor Riley says, "deaths and cases decreasing for four years, then increasing gradually the fifth year and sharply the sixth. Peaks occurred in Mississippi in 1921, 1927, 1933, and the next is due in 1939. Already evidence is plain that the disease is on the increase this year, and reports from T. T. Brackin, inspector for malaria control, reveal that mosquitoes are twice as prevalent as last year."

"The permanent drainage program of the State Board of Health is progressing, and malaria peaks in the state are gradually descending, but until every swamp and stagnant pond in the state is adequately drained, we shall continue to have malaria," Doctor Riley says.

Following a long-range survey of tuberculosis, Dr. Felix J. Underwood believes that the outlook for controlling this disease within the next generation is bright.

"The tuberculosis death rate in Mississippi in 1918 was 156 per hundred thousand population," Doctor Underwood states, "while in 1927 the rate had declined to 91, and last year was down to 60. If the decline continues in the same proportion for the next twenty years, there is every reason to believe that the death rate from this disease in 1957 will be only 23 per hundred thousand."

"The nearer the goal, however, the harder the work necessary to attain it," Doctor Underwood declares. "Graphs depicting declining death rates show at first a rapid swerve downward on the application of reasonable control measures. Toward the end of the picture, the declining line tends to straighten out indicating the ever-increasing work necessary to make new gains as well as hold the ground already won."

An analysis of the figures on sanitation in Mississippi by H. A. Kroeze, Sanitary Engineer, and Dr. A. L. Gray, Director of Preventable Disease Control, reveals that though Mississippi has come a long way in sanitary excreta disposal, only one family in approximately four can dispose of human wastes in a sanitary manner.

"As long as this fact is true, the hazards of typhoid fever, hookworm diseases, and other filth-borne diseases are constantly hanging over the heads of Mississippians, and there should be no false sense of security regarding the very real danger of these diseases," Doctor Gray states.

"Based on a random survey of 16,000 people in twenty counties of Mississippi, it is estimated that there are 2500 typhoid carriers in the state," Doctor Gray says. "Of the 16,000 people surveyed, 6 per cent have had typhoid fever, and 2 per cent of these are carriers. Even if the status of sanitation was perfect, these unknown typhoid carriers would be a constant menace, and unremitting efforts are therefore aimed in three directions—at improvd sanitation, immunization, and the locating of carriers."

An encouraging note is seen in Mr. Kroeze's figures showing that more than 89,000 sanitary privies have been built from December, 1933 through June, 1938 with relief labor. Based on the rate of previous years' accomplishments, it would have taken twenty-nine years to build this number of toilets.

Interesting statistics disclosed by Dr. J. W. Dugger, Director of Industrial Hygiene, and covering a fourteen-month period of work among factory employees show that 548 Wassermanns made on colored people, 38.1 per cent were positive, and of 4498 made on white people, 1.3 per cent were positive. Of 3824 tuberculin tests given, 35.2 per cent were positive, 2.6 per cent having positive chest x-rays.

Half-way round the world from home, Dr. Y. J. Lee of China, and Dr. Menduh Olcer of Ankara, Turkey, are spending a portion of July and August observing the work of the State Board of Health. Doctor Lee has been on a fellowship for the past year at the School of Hygiene, Johns Hopkins University, while Doctor Olcer has been studying at the Harvard School of Engineering on a Rockefeller Foundation Fellowship.

Dr. Felix J. Underwood went on the Know Mississippi Better Tour, July 16-30. Displayed on this train was an exhibit of Board of Health charts and graphs depicting public health progress.

Staff conferences were held in the State Board of Health Library, July 2 and 16, with Mr. H. A. Kroeze, Director of Sanitary Engineering, and Dr. J. W. Dugger, Director of Industrial Hygiene, in charge. General discussion followed reports on the work of these two divisions.

In order accurately to compare sanitation work in Mississippi with that of other states, Mr. Joseph E. Johnston, Advisory Sanitation Supervisor, has been on a month's observation tour of Tennessee, North Carolina, Ohio, Indiana, Michigan and of the Chicago Plumbing Laboratory.

"Mississippi is to be congratulated on its well-balanced sanitation program," Mr. Johnston says.

On July 25, Professor Roy J. Morton, Assistant Professor of Preventive Medicine and Public Health, Vanderbilt University School of Medicine, Nashville, Tennessee, visited the State Board of Health.

State Board of Health radio speakers over WJDX at 9:30 each Saturday morning during July together with the subject of their talks were:

July 2.—Dr. R. N. Whitfield, Director of Vital Statistics—"Developing A Safety Conscience."

July 9.—Dr. Felix J. Underwood, State Health Officer—"Some Facts About Tuberculosis."

July 16.—Dr. J. A. Milne, Director of County Health Work—Correcting Bad Habits in Children."

July 23.—Dr. H. C. Ricks, Director of the State Hygienic Laboratory—"The State Hygienic Laboratory and the War Against Disease."

July 30.—Dr. D. V. Galloway, Director of Veneral Disease Control and Miss Gladys Eyrich, Supervisor of Mouth Health—"The Value of Syphilis Education."

Personnel changes during the month of July included the naming of Dr. B. Alvis Stafford, Jr., as new health officer of the Sharkey-Issaquena unit. Doctor Stafford succeeded Dr. R. H. DeJarnette, who was transferred to the new unit in Alcorn County, July 1.

Prior to entering the public health field, Doctor Stafford was graduated from the University of Texas, received his interneship at Sacramento Hospital, California, and engaged in general practice for five years in Gridley, California. Doctor Stafford then became city epidemiologist in Ft. Worth and later served as assistant director and as director of the county training unit of Texas. He came to Mississippi from the Bell County Health Department, Texas, of which he was director.

The malaria control program of the Board of Health has been reorganized, and Dr. Geo. E. Riley, supervisor of malaria control for a number of years, has been promoted to malariologist and assistant epidemiologist in the division of preventable disease control.

T. T. Brackin, Jr., will continue to work with Dr. Riley in the capacity of medical entomologist.

Nelson Rector will function as supervisor of malaria control engineering in the division of public health engineering. The remaining engineering personnel of the malaria control staff will also be transferred to the public health engineering division.

"The record made by Dr. Riley and Mr. Rector in malaria control work during the past ten years has greatly reduced the cases and deaths from malaria in the state and brought much favorable comment from other sections and foreign countries, and has also brought many visitors from beyond the borders of the state to observe the work," Dr. Underwood said.

All engineering features of the malaria control program hereafter will be under the general direction of H. A. Kroeze, director of sanitary engineering, and under the supervision of Mr. Rector, while all medical features of the malaria control program will be carried out under the general direction of Dr. A. L. Gray, director of preventable disease control, and under the direct supervision of Dr. Riley.

Jackson, Felix J. Underwood,
August 4, 1938 Executive Officer.

HOSPITAL STAFF TRANSACTIONS

MISSISSIPPI STATE HOSPITAL ASSOCIATION, Tenth Annual Session, Gulfport, May 8, 1939.

Aberdeen Hospital: Third Monday, each month, 7:00 p. m.

Anderson Infirmary: First Friday, each month, 6:30 p. m.

Biloxi Hospital: First Thursday, each month, 7:30 p. m.

Bramlett Hospital: Third Wednesday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 12:00 noon.

Field Memorial Hospital: Second Thursday, each month, 6:30 p. m.

Gilmore Sanitarium: Third Thursday, each month, 8:00 p. m.

Greenwood-Leflore Hospital: First Thursday, each month 6:30 p. m.

Grenada Hospital: Second Tuesday, each month, 6:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month. 7:30 p. m.

Holmes County Community Hospital: Second Thursday, each month, 7:00 p. m.

Houston Hospital: Last Thursday, each month, 7:30 p. m.

Ivy Hospital: First Monday, each month, at 7:00 p. m.

Jackson County Hospital: Second Thursday, each month, except July and August, 7:00 p.m.

Jackson Infirmary: Last Tuesday, each month, except three summer months, 7:00 p.m.

King's Daughters Hospital, Brookhaven: First Tuesday, each month, 7:00 p. m.

King's Daughters Hospital, Greenville: First Wednesday, each month, 7:00 p. m.

King's Daughters Hospital, Gulfport: Third Thursday, each month, 8:00 p. m.

King's Daughters Hospital, Yazoo City: First Monday, each month, 7:30 p. m.

Macon Hospital: First Tuesday, each month, 7:30 p. m.

Magee General Hospital: Twenty-fifth each month, 7:30 p. m.

Mayes Hospital: First Monday, each month, 2:30 p. m.

McComb City Hospital: First Tuesday, each month, 6:00 p. m.

McComb Infirmary: Second Thursday, each month, 7:00 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Mississippi State Hospital, Vicksburg: Third Tuesday, each month, 7:00 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

New Albany Hospital and Clinic: Second Tuesday, each month, 8:00 p. m.

Newton Hospital: Second Thursday, each month.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Oktibbeha Hospital: Last Thursday, each month, 7:30 p. m.

Oxford Hospital: Last Monday, each month.

Pontotoc Clinic: First Tuesday, each month, 7:30 p. m.

Rush's Infirmary: First Friday, each month, 7:30 p. m.

Scott County Hospital: Third Wednesday, each month.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

Tylertown Hospital: Second Thursday, each month, 7:00 p. m.

U. S. Veteran's Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:30 p. m.

HOSPITAL STAFF TRANSACTIONS

BRAMLETT HOSPITAL

The regular staff meeting of the Bramlett Hospital, Oxford, was held July 20 at 7:30 p m. General discussion ensued followed by an operative clinic on mastoidectomy—post measles, demonstrated by Dr. B. S. Guyton.

Oxford, E. V. Bramlett,
August 1, 1938. Secretary.

VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Wednesday, August 10, and after a supper served at 6:30 p. m., was called to order by the president, Dr. Leon S. Lippincott, thirteen members and two guests present.

The program included:

Reports from the Records Department and Analysis of the Work of the Hospital.

Special Case Reports—

(1) Nephrolithiasis (Two Cases).—Dr. A. Street.

(2) Gunshot Wound of the Abdomen with Recovery.—Dr. J. A. K. Birchett, Jr.

Discussed by Drs. G. M. Street, L. J. Clark, R. A. Street, Jr., F. M. Smith.

(3) Toxic Hepatitis.—Dr. L. J. Clark.

Discussed by Dr. G. M. Street, A. Street, J. A. K. Birchett, Jr., G. C. Jarratt, G. W. Gaines, H. H. Johnston and F. M. Smith.

Report of Vital Statistics.—Dr. F. Michael Smith, Director, Warren County Health Department.

Demonstration of Selected Roentgen Ray Studies—Giant Cell Tumor of Fingers; Osteititis Fibrosa Cystica (Pelvis and Skull); Foreign Body (Bullett); Cholelithiasis; Left Ureteral Calculus.

Three-Minute Reports of the Literature of the Month: Dr. R. A. Street, Jr.—Blood Chemistry Findings in Toxic Pregnancy; Dr. H. H. Johnston.—Nasal Allergy; Dr. L. S. Lippincott.—Delay In Treatment of Cancer.

On motion of Dr. George Street, the president was asked to appoint a committee to draw up suitable resolutions in memory of Dr. J. A. K. Birchett. Dr. George Street and Dr. F. Michael Smith were appointed.

The next meeting of the staff will be held Monday, Sept. 12, 1938.

ABSTRACT: GUNSHOT WOUND OF THE ABDOMEN WITH RECOVERY

J. A. K. Birchett, M.D.

Patient. White, male, age 17. Seen in the Out-Patient Department of the Vicksburg Sanitarium, July 3, 1938 at 1:30 p. m.

Present Complaint. Gunshot wound of the abdomen.

History of Present Complaint. About two hours ago, while in a boat fishing, a 22-rifle was accidentally discharged, the bullet striking him below the margin of the ribs on the left side, penetrating the abdomen. There was immediate shock, extreme weakness, and considerable pain for a short time, and then general numbness. He did not vomit any blood. Patient was then placed in an automobile to be transferred to a hospital. The trip was over considerable rough road due to detours, and again the patient complained of severe pain in the upper abdomen and back and felt several times like he was going to faint. On the way he had marked thirst and requested that they stop, when he drank a bottle of soda pop, which he immediately vomited. There was no blood in the vomitus.

Past History. No serious illnesses; no operations; no injuries. General health always good, except malaria last year.

Family History. Irrelative.

Physical Examination. Well developed and nourished white male of 17 with evidence of marked shock, the temperature being subnormal, 96°F, and the pulse 68 and of fair volume. Blood pressure: 80 60. Head and neck essentially negative. Heart and lungs apparently normal, except for the extreme slowness of the pulse. X-ray taken showed no evidence of injury to the thoracic cavity or lungs. The abdomen, on inspection, showed a small penetrated wound just below the left costal margin, about the size of the diameter of a lead pencil. There was beginning rigidity of the left rectus. The lower abdomen was soft. Palpation of the lumbar region elicited a hard mass under the skin to the left of the vertebrae, which was taken to be the bullet, and x-ray of the abdomen did not show any fluid levels or gas bubbles, but the bullet was noted to the left of the thoracic spine. A catheterized speciment of urine failed to show any blood. Blood count was normal, and patient was immediately typed for transfusion at the time that blood examination was done.

Procedure: It was evident that we were dealing with a perforated viscus, probably of the upper left abdomen and immediate surgical intervention was indicated. Patient was in such a marked state of shock immediately upon admission that he was given 1000 c.c. of glucose and adrenalin to combat shock, and morphine was administered because of pain. Up to this time, the patient had had no anodyne whatsoever. About one hour after admission, the immediate shock had been combatted and, under a general anaesthetic, cyclopropane, an upper left rectus incision was made, medial to the bullet wound, and the abdomen carefully explored. There were six perforations of the jejunum, the lowest of which included the fold of the ligament of Trietz. All perforations were closed by transverse suture with two rows of continuous sutures and one row of interrupted sutures. All abdominal viscera were carefully inspected, especially the spleen, liver, pancreas and the transverse and descending colon, for evidence of injury, but no evidence of traumatism was found. Eight Rehfuss drains were placed in the upper left retrocolic area and the wound closed by through and through retention sutures. Immediately following surgery, the temperature rose to 103°F following the administration of 500 c.c. of citrated blood. The temperature continued to range from 101 to 103°F until the end of the fourth day, when the temperature gradually dropped to normal, reaching that level on the ninth day. There was no distension, which was combatted by the placement of the duodenal tube and colon irrigations, and the use of the heat tent. Glucose was given, 1000 c.c., intravenously, daily. He was given soft cereal diet on the seventh day. On the eighth day, two tubes were removed and, by the fourteenth day, all tubes had been removed, and the wound was closing nicely. On the fourteenth postoperative day, patient was taken to surgery and, under local anesthesia, an incision was made and the bullet removed from the left lumbar region. Patient made an uneventful recovery and was discharged on the twentieth postoperative day.

ABSTRACT: TOXIC HEPATITIS

Patient. White, male, age 34; occupation, gasoline service station operator. Seen in outpatient department June 24, 1938.

Chief Complaint. Abdominal cramping, nausea and malaise.

History of Present Complaint. For past few weeks has lost some twelve or fifteen pounds in weight, general disability. Loss of weight he attributed to fear of food more than anything else. Has been under local ear, nose and throat physician for several weeks taking treatment for sinus trouble. There has been no illnesses in past; always well and has been a hard worker; has a large appetite and is partial to highly seasoned foods; does not drink or smoke; is inclined to constipation; has distention constantly; is fairly comfortable when stomach is empty. In addition to the treatment noted he is also being treated for failing hearing. This condition he has noticed has been gradually getting worse for the past three or four months.

Past History. No illnesses of any consequence.

Physical Examination. Temperature 99°F, blood pressure 125/80; teeth in good condition, skin definitely icteric, tonsils embedded but no pus demonstrated; throat shows quite a bit of post nasal dripping; neck negative, heart and lungs negative; abdomen except for a general amount of soreness and an enlarged liver of about two inches entirely normal. No fluid or localized tenderness except slight tenderness over the gallbladder region. Reflexes were normal, prostate gland was entirely normal, there were no herniae, extremities and all glands were negative.

Laboratory Examination. Icterus index 20.-30; Wassermann negative; urinalysis showed few blood cells, otherwise normal. Blood: hemoglobin 82%, erythrocytes 5,070,000; leukocytes 7,500 with a normal distribution of cells. There was no stippling reported, no malaria found.

X-ray of gallbladder with dye showed no filling. Gastric analysis of one specimen showed free HC1 8; no lactic acid; no blood or other unusual findings. Fluoroscopic examination of stomach was normal. Right diaphragm was slightly high and fixed; meal was swallowed well, stomach was of fish-hook type and atonic in character; duodenal cap was large and regular; duodenum itself was large; there was reverse peristalsis noted in duodenum.

Procedure. This patient stated that he had noted in the past few weeks that his hearing was getting worse and it was more important for him to have his head close to the gasoline tank while filling in order to tell how much gasoline was needed and that he noticed that he had inhaled quite a bit of the fumes of this gas and it now seemed to make him sick. He was put on treatment and advised to discontinue work for a period of time. The treatment consisted of a high carbohydrate diet, moderate proteins and fats. He was also given liver together with calcium gluconat intravnously, and a mild laxative and advised to take frequent feedings and to be as quiet as possible at home. At the end of one week he was feeling considerably better and was advised to continue another week on the same treatment without work. He gained about eight or ten pounds. He was then allowed to return to work and it was noticed that as soon as he began to handle gasoline again the condition recurred.

As we know gasoline today, there is the type that is called regular and ethyl which has lead added to it that seems to be the factor responsible in the lead poisoning hepatitis. These conditions are more noticeable each day and there has been much reference to them in the literature of 1937 and up to the present time.

Comment. Herbert Pernice of Germany has made an extensive investigation into the role of the liver and lead poisoning. The liver has great significance in storage, detoxifications and excretion of heavy metals, metaloids and light metals. It filters the substances absorbed from the gastro-intestinal tract by the portal vein, stores and binds products which are foreign to the body and deleterious to the protoplasm, provides for the removal by other organs or their excretion through the bile. As a result damage to the liver parenchyma occurs.

The ports of entry for lead are the respiratory and gastrointestinal tracts. Pernice has studied twenty-three patients who did not come in contact with lead as compared with the autopsy investigations on three patients who had had lead poisoning. The lead content of tht various parts of the bodies was greatly increased and especially in the liver.

By evaluation of the history of the disease in 21 cases it was possible to distinguish five types of liver damage: (1) swelling of the liver with subicterus; (3) swelling of the liver with icterus; (4) icterus without swelling of the liver; (5) acute yellow atrophy of the liver. These twenty-one patients belong to a series of 1,000 examined within nine years. Consequently, it is admissable to count on 2.1 per cent of cases of liver damage in lead poisoning. Icterus in lead poisoning depends on toxic damage to the liver cells. The swelling of the liver was especially marked in artificial lead poisoning by lead-eating. The author warns against overestimation of very small amounts of lead in the liver even in lead workers.

Pernice also reports on experimental investigations on the problem of combined poisonings. He started with the concept that severe signs of disease are to be expected from the action of a second poison on a liver that has already been damaged, because the detoxifying function of the liver must have been decidedly injured by the first poisoning. Using guinea pigs, he first poisoned them by means of subcutaneous injections of lead acetate; he provided the second poisoning by inhalation of trichlorethylene or injections of arsenic. The criteria for the occurrence of poisoning were the demonstration of stippled cells in the blood smear and damage to the general condition. An intensified action of the two poisons, especially on the liver, was demonstrated. On the basis of these investigations, a warning is sounded not to treat a patient poisoned by some heavy metal with another heavy metal or a metaloid. The combining action of alcohol is pointed out.

THE WOMAN'S AUXILIARY

THE AUXILIARY MEMBER OF TODAY

By Mrs. C. C. Hightower,
Hattiesburg, Miss.

When I first became interested in auxiliary work a number of years ago, I had a distinct fear of the organization because of its professional nature.

How can women, I argued to myself, have anything to do with any kind of organization in this world and not make possible effort to dominate its policies?

I acknowledged my indebtedness to the medical auxiliary for convincing me that women can function in an organization and remain most content in the background. How quickly the auxiliary could have been killed by the officious, dominating type of women!

There are still doctors' wives over the state who are not sufficiently convinced that their sisters are capable of playing the minor strain of this stirring symphony without crashing into discord and destroying the effect of the entire score.

This ability to wait until called upon by the Medical Association for very active work is one of the finest attributes members of the Auxiliary have derived from the organization.

This is no reflection on the doctors' wives, either, for their daily lives train them to dominate situations. They continue to be the dominating factor in the home, responsible for the details of the family from the personal welfare of the doctor himself (and what man is more dependent on his wife for every detail of living) to the minutest ails of the yard boy.

However, Mrs. Kech, A. M. A. president, said in her splendid address in New Orleans last fall, the problems confronting the medical associations and auxiliaries in the South are entirely different to those in the East and North where the foreign element is so great.

There, it is necessary to keep active committees from the auxiliaries working with the legislative committees from the medical associations constantly functioning in the various state legislatures to put thru desirable health laws and to prevent undesirable laws which today are threatening the medical profession.

While we are freer at present from interference by the state, the rapidly changing social order in our civilization today is bringing about strange new social, ecenomic, and professional problems of vital concern to the entire populace which will surely result in changes in our Southern affairs.

In the South, where the underprivileged is largely the native Negro, cared for regardless of financial conditions by the whites, the problems of organized charities is not so great.

The New Deal, however, has made great changes in this relationship, and organized charity is growing more common. In spite of this the Negro still looks to his white folk to be responsible for him when he is hungry, provide work, give him clothes, etc.

Organized philanthropy has never been very popular with the Southern woman for it does not contain the human relationship she feels toward her servants or others dependent upon her for help.

Perhaps the greatest criticism that can be made of some doctors' wives is their indifference to their responsibility to the profession in the matter of disseminating facts concerning the progress of medicine. Short programs on vital subjects at our meetings, published afterwards in the local papers would help the profession; and to be able intelligently assist or direct health programs in other organizations and clubs the auxiliary member must first be well informed with authentic information.

Characteristically Southern, the most stressed phase of auxiliary work in our state is social, a fostering of fellowship within the profession. Strong friendships have been formed, a desirably tolerant and helpful attitude has been developed and, we like to feel, the State Medical Association has been made more pleasant and effective because of the Auxiliary.

May we hold to the splendid advantages we have gained and go forward to greater usefulness in our capacity as an auxiliary to the Mississippi State Medical Association.

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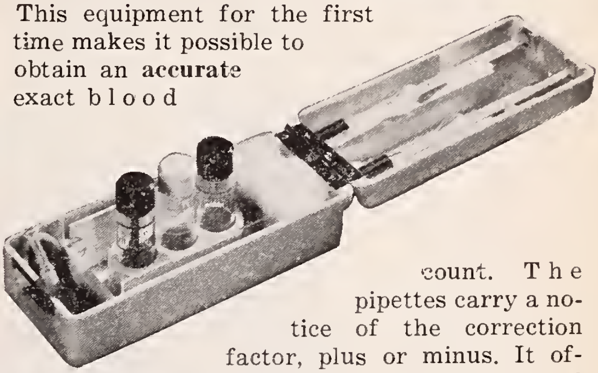

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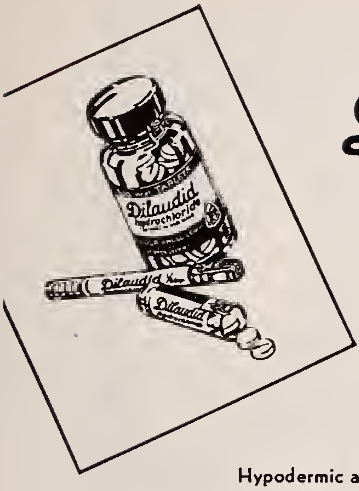

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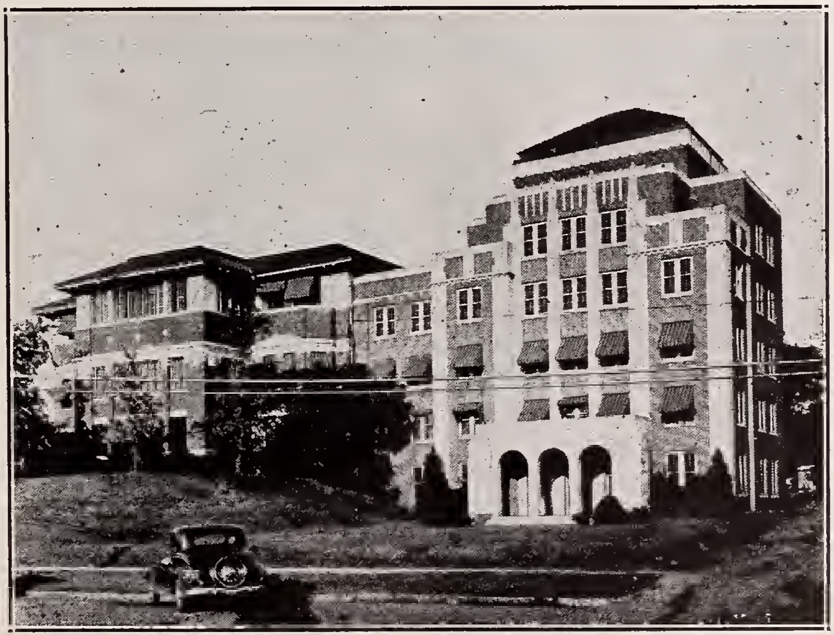

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An Old Song

*(Hebrew translation from Yehoash
by Marie Syrkin)*

In the blossom-land Japan
Somewhere thus an old song ran.

Said a warrior to a smith
"Hammer me a sword forthwith.
Make the blade
Light as wind on water laid.
Make it long
As the wheat at harvest song.
Supple, swift
As a snake, without rift,
Full of lightnings, thousand-eyed!
Smooth as silken cloth and thin
As the web that spiders spin.
And merciless as pain, and cold."

"On the hilt what shall be told?"

"On the sword's hilt, my good man,"
Said the warrior of Japan,
"Trace for me
A running lake, a flock of sheep
And one who sings her child to sleep."

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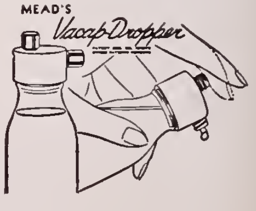

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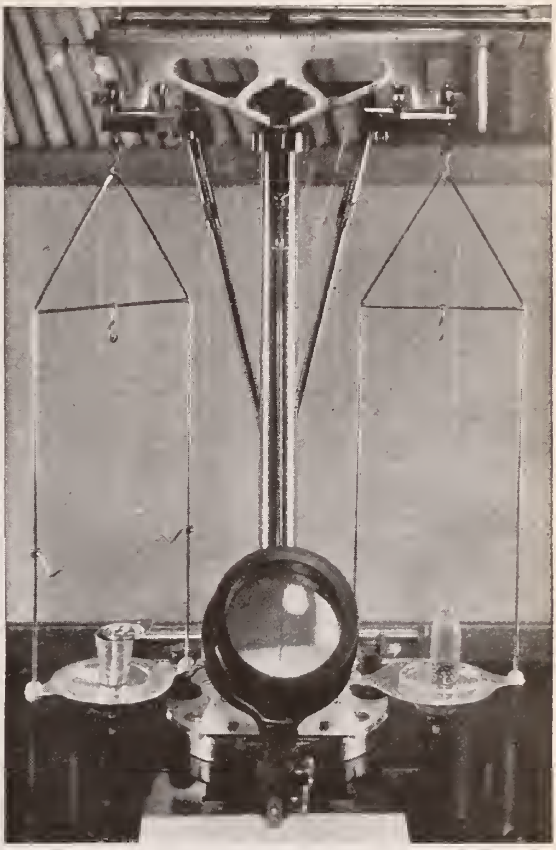

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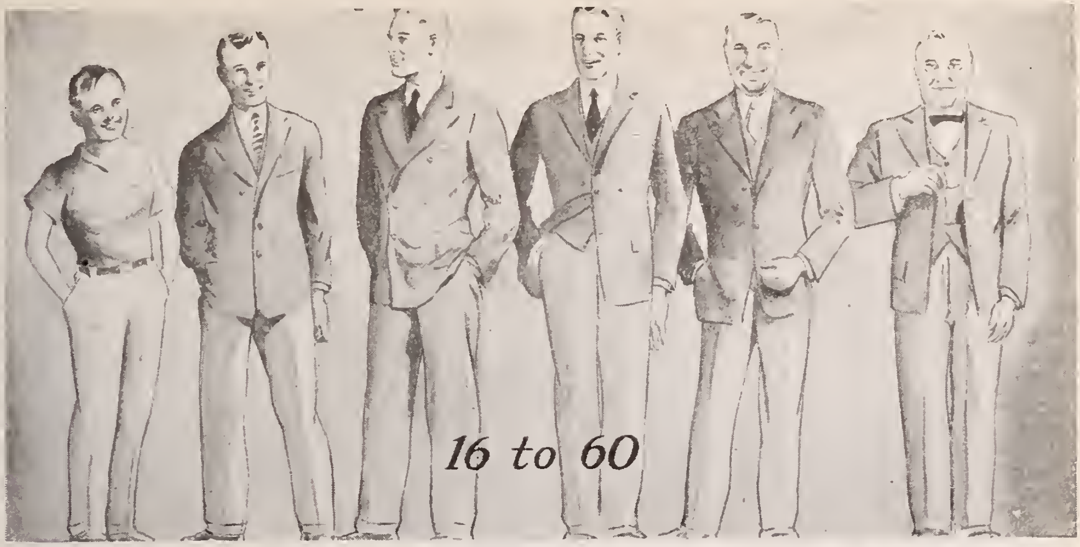

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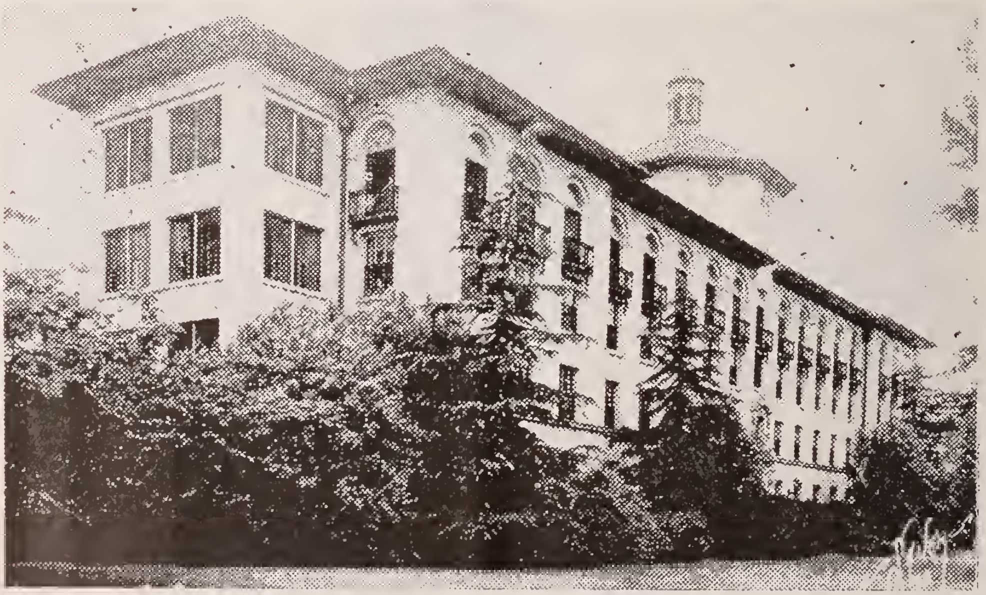

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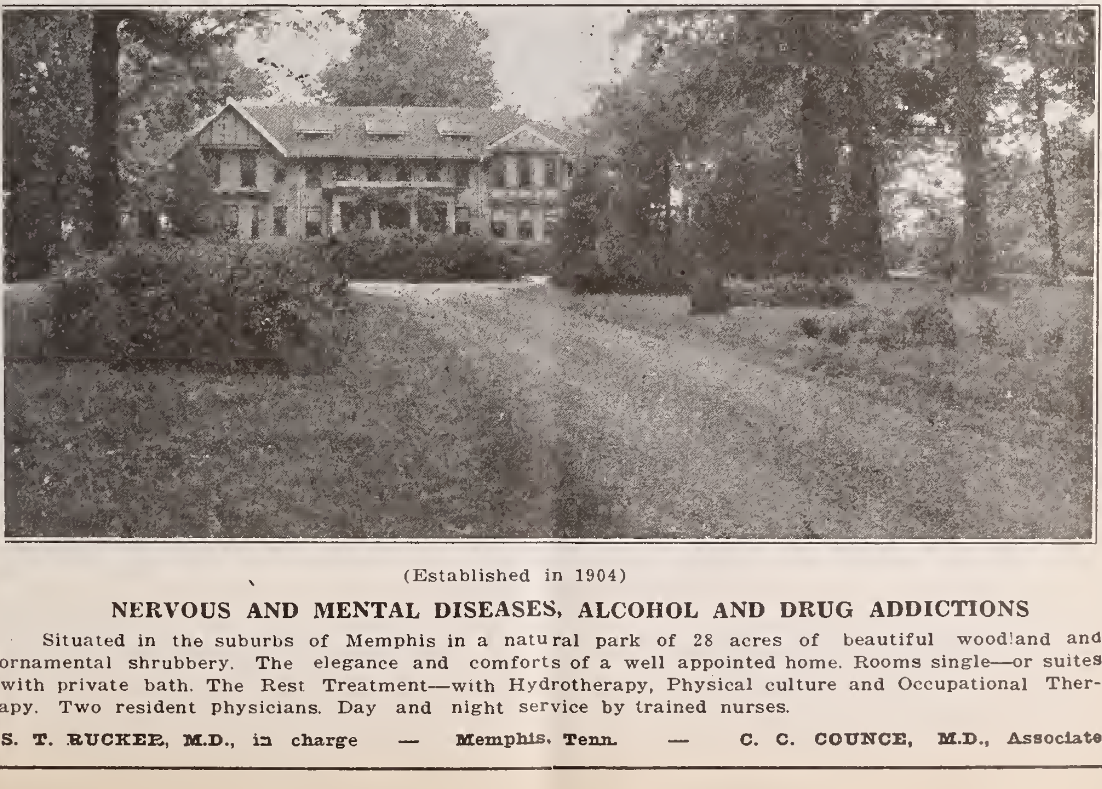

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The Favorable and Unfavorable Results from the Practice of Modern Obstetric Trends and Procedures*

GEO. W. KOSMAK, A.B., M.D., F.A.C.S.
NEW YORK, N. Y.
Editor, American Journal of Obstetrics and Gynecology

THE PRESENT would appear an opportune time for a frank presentation and discussion of the influence of so-called modern or advanced obstetric trends and procedures in so far as the general welfare of women is concerned. In other words, what progress has been made to render the process of childbearing safer, easier or more comfortable, and what compensation have we secured by the use of various therapeutic measures that characterize modern obstetric practice during, let us say, the last 75 years? For it is during this period approximately that many advances may be recorded in this important branch of medicine. In that time obstetrics has gradually but steadily developed as one of the major specialties, although it constitutes a specialty not limited in its ordinary practice to specialists. The general practitioner still confines an appreciable number of women; the midwife also her share. Therefore the doctor, aside from the obstetric specialist, has or should have a deep interest in any consideration of the general aspects of maternity care. He must be aware that childbirth is not entirely free from risk. that a certain number of women succumb in carrying out a natural function and, finally, it would appear that changes in the methods of handling pregnancy cases have not contributed sufficinetly or satisfactorily to a lowering of the puerperal death rate.

Before proceeding to a consideration of these problems, it may be well to present a few general facts and it is necessary to quote certain figures from official sources in order to appreciate the extent of the problem. Reports made by the Federal Census Bureau disclose that the fatalities assigned to pregnancy and childbirth during the last seven years are as follows: For 1930, 14,836 or 67.3 per 10,000 live births; 1931, 13,964 or 66.1 per 10,000 live births; 1932, 13,071 or 63.4; 1933, 11,988 or 61.2; 1934, 11,936 or 58.6; 1935, 12,544 or 58.2, and in 1936, 12,182.

Now, if we go back as far as satisfactory vital statistics are available, we find that in 1915 the rate was 66 per 10,000 in the U. S. Registration area of ten states; in 1926 it was 66, when the area included 26 states as compared with 1933 when it included the entire continental United States, and was about 62. However, since 1915 in particular, recognized plans and methods for better pregnancy care were developed; prenatal observations, increased hospitalization, more operative deliveries, obstetric analgesia, all are essentially products of this period. But do they show any appreciable effect on maternal mortality or morbidity? We can judge this only by countrywide results and they do not seem to be much better in 1936 than they were in 1915 and 1926, two average years in each decade. Apparent reductions in more recent years moreover must be considered in relation to the steadily declining birth rate.

Before proceeding with a detailed inquiry into results, it may be well to inquire into the means by which obstetric progress has been measured in the last half century.

The possible failure of Nature to terminate pregnancy successfully has been recognized almost since historical records became available. Both civilized and uncivilized peoples have developed means of assistance in labor—very crude, dangerous and destructive instances, because the reasons were unknown for the complications which called for interference. However, in the course of time, we find a gradual growth in knowledge of the sources and reasons for obstetric hemorrhage, for malpositions of the fetus, for pelvic abnormalities and their role in dystocia, for toxemia, for septic infection. But even today our knowledge of the possible complications of pregnancy is by no means complete and we find that hemorrhage, sepsis and toxemia still constitute a trinity of casual factors which account for most of the deaths of prospective mothers. And these are many, for as nearly as can be determined from available statistics, among approximately 15,000 puerperal deaths which occurred in 1930 in the United States, over 1500 resulted from hemorrhage (about 1/3 of these with placenta previa), over 3000 from sepsis, and about 4000 from toxemia. In 1935 the relative proportions were about the same for hemorrhage (1370), with no satisfactory reduction in septic deaths (2900), but a noticeable diminution in those due to toxemia (200). In 1936, among 12,182 deaths there were 4606 from sepsis, 2784 from toxemia and 1398 from hemorrhage. If we compare these rates with those of a decade ago we find very little change except in toxemia. The deaths from abortion have shown a definite increase, those from ectopic pregnancy are about the same, the accidents of labor are somewhat increased in more recent years, although in 1934 they were slightly less (7.5 per 10,000 lives as compared with 8.7 in 1932).

---

*Read before the Mid-South Post-Graduate Assembly, Memphis, Tenn., February 18, 1938.

Does this lack of improvement indicate that we must accept a rate of approximately 6 to 7 per 10,000 live births in the United States as an irreducible figure? Are these deaths altogether unavoidable and to be regarded as the legitimate toll of childbearing?

Closely supervised studies of conditions by competent authorities disclose what has been designated as a "preventability factor." The latter is freely discussed, for example, in the recent New York Academy of Medicine Report. In this particular study of 2041 puerperal deaths in New York City in a three-year period (1930-1932 inclusive), the jury of doctors regarded 1343, or 65.8 per cent as preventable in the sense that, if these women had had proper treatment and care, they could have been brought safely through their pregnancies. This decision was based on a full knowledge of each case as disclosed by a study of the facts obtained by physician investigators. The committee did not always ascribe responsibility to the physician; he was considered responsible in about 60 per cent of the cases, the patient or family in 37 per cent, and the midwife in 2 per cent. It is not necessary to go further into a discussion of this report except to add that when similar studies from other cities, based on individual death records, were published, the results were no better and sometimes a bit worse, and this cumulative evidence is rather discouraging for it is not based on generalities but on established specific facts.

If we are to believe the conclusions arrived at in the studies, there evidently is a problem presented by the puerperal mortality rates in this country which is not academic and which constitutes a direct challenge to the medical profession for its to-be-hoped-for solution. I have refrained from a comparison of the U. S. statistics with those of foreign countries, for several competent statisticians have shown the falsity of such comparisons because of the differences in basic factors. In this country we are arriving at a new basis for judging the results of our obstetric practice by studying the circumstances surrounding each individual death and estimating as near as we can, the preventability factor. It is by these standards that we are forced to conclude that our puerperal rates, unfortunately, are too high if we regard them in the light of progress in the handling of other conditions. If obstetrics practiced today is both a science and an art, although one may be tempted sometimes to deny the latter, then we may be permitted to analyze such practice and find out, if possible, what effect our vaunted advancements have had.

To begin with, it must be noted that especially during the last 25 years, great changes have taken place in American obstetric practice. Among other things, the hospital has been substituted for the home as the place of confinement in from 75 to 80 per cent of all cases, particularly in our larger population centers. This undoubtedly has contributed to the ease and comfort of patients, although not necessarily to their safety. It was soon found that contact, direct or indirect, with patients under the same roof afflicted with other illnesses, was a potential source of danger from infection. Where satisfactory isolation of obstetric patients is possible, puerperal sepsis is less likely, but even under the best hospital environment, epidemics of sepsis have occurred within recent years with more or less disastrous results. And this danger will persist where there is commingling of patients, doctors, and nurses, especially in smaller hospitals and nursing homes with inadequate facilities. Moreover, the more frequent resort to hospitals has provided a temptation for operative interference, with ultimate results that are often deplorable. It may be of interest therefore to analyze briefly the results from the more general employment by the profession at large, of modern obstetric procedures in order to ascertain the effect of their employment on our puerperal mortality and morbidity. I have no intention of condemning or disparaging these; such additions to our methods and knowledge have contributed much to the comfort and safety of pregnant women but some thought should be given to the ultimate results and to the effects of their, perhaps, indiscriminate employment.

May we begin with prenatal care? There is nothing which has had such an important bearing on prophylaxis as the extended and carefully worked out systems of care during pregnancy developed in this country, and a recognition of the fact that a woman should place herself under medical direction as soon as she believes she is pregnant. The latter seems almost a foregone conclusion and yet it has failed of acceptance by many patients and some doctors. Women in considerable number still fail to go to a doctor or hospital until well along in their pregnancies because of ignorance or carelessness. The situation, however, is improving, owing to the good work of many medical and lay groups organized for this purpose. Adequate prenatal care however demands equally good labor care. Urinalyses, blood pressure estimates and pelvic measurements are entirely useless if the period of labor itself is neglected or mismanaged. The obstetric patient must be viewed as an entity. She must be prepared physically and mentally for the crowning act in the process. Therefore insistence upon proper hygiene and a knowledge of the patient's vital capacity as reflected in her heart, lungs, kidneys and blood stream, is of greater value and importance than a few routine pelvic measurements. We must pay more attention to this vital capacity and such knowledge can only be gained by a close association with a patient by doctor or clinic during the prenatal period.

Adequate prenatal care, which means timely care, has undoubtedly borne fruit. The incidence of the severe grades of toxemia in particular has been largely reduced in many places through the adoption and exercise of comparatively simple measures, in which diet and hygiene play an important part. We are not certain as yet of the role of the kidney and perhaps other organs in this constitutional disturbance, nor can we estimate by simple means their functional capacity, but it is evident that even our inadequate knowledge has had a well marked response.

But can we do anything during the prenatal period to develop equally good results as regards the avoidance of sepsis and hemorrhage associated with subsequent labor? Evidently prophylaxis has met here its Waterloo. Perhaps we have gone as far as we can with our reliance on good prenatal care as a preventive measure and should improve obstetric practice in other respects. For the admission must be made that, with the final test, namely labor, we still find associated an unfortunately high mortality rate, which our vaunted resort to hospital confinements and frequently employed operative deliveries, has not lowered sufficiently to make it acceptable or satisfactory. And we may again reiterate that any condition with which the doctor has to deal, such as pregnancy, which shows a general mortality rate anywhere from 6 to 7 per cent, might well be looked upon as requiring attention.

One may be accused in making statements of this kind, that they are based on generalities. In support of an opposing and perhaps more optimistic view, may be marshaled the statistics of leading hospitals and medical centers, in which a series of a thousand or more cases are conducted with a death rate of only 2 per cent or less. But that is not a satisfactory answer to a countrywide rate of 6 or 7 per cent. For obstetric practice outside of these favored places must yield a figure even higher to produce this average. Perhaps it will mean that if the most expert obstetric care should be given to every prospective mother in the United States, we might bring the mortality rate down to an unavoidable minimum. This is an ideal impossible of fulfillment. I cannot believe that to be the solution. Rather, we must do away with poor care and develop a system of average care which will meet the requirements. This can be attained. It means that every practitioner who does confinement work must be made to realize his individual limitations and capabilities; he must rely for success on his thorough knowledge of the physiology of pregnancy and labor; he must be able to recognize deviations from the normal and he must be prepared to ask for help when needed, and when this is not available, to do the best he can, remembering that spontaneous termination of labor is not unusual even in the face of apparently unsurmountable obstacles. The most serious causes of fatalities can usually be avoided, namely, sepsis and hemorrhage, by the aseptic conduct of labor in the former, and by timely recognition and treatment in the latter.

Where shall we seek the answer to an accusation that the medical profession must hold itself responsible for high mortality rates? Childbearing is not free from risks but are the risks avoidable? An inquiry may well be directed to present-day procedures which have been hailed as measures of safety and relief, in order to determine whether they have accomplished what is claimed for them. Such methods are concerned mainly with hospitalization, with methods of pain relief, with operative deliveries.

The hospitalization of maternity patients in recent years has progressed in line with those presenting a variety of medical and surgical illnesses. Hospitalization has contributed much to the ease and comfort of the patient as well as of the doctor and the nurse. But unquestionably it has opened up a wider resort to artificial methods for delivery which are not readily applicable in the home. Coincident with the increasing hospitalization of pregnancy cases, there has come about an increase in operative deliveries. A spontaneous termination of labor is, as a matter of fact, becoming rather unusual in many institutions.

It may be opportune to review some of the more generally employed obstetric procedures, including forceps, version, and cesarean section, and attempt to evaluate their end-results.

The forceps constitute an important component of the obstetrician's armamentarium. No one would decry their value, but dangers in their use likewise are admitted. Forceps applications are classified according to certain arbitrary criteria; those applied to the head high in the pelvis are less used today because of the greater resort to cesarean section and, perhaps, a better knowledge of pelvimetry. But median and low applications are frequent and the inspection of almost any hospital service records will show a large forceps incidence. Judging from the resultant damage to the maternal soft parts, the necessary indications, especially the fully dilated or even dilatable cervix, evidently are not invariably present. And in recent years we have added the prophylactic or outlet forceps—a truly valuable procedure under proper conditions. But why this general readiness to resort to forceps merely to hasten delivery, with the accompanying danger of sepsis and hemorrhage, especially when there is no call for haste? I fully realize that the importunities of the patient and her family may influence the doctor's judgment and that, in expert hands, the forceps is an invaluable instrument. But we must regard the average as the usual practice and the more we can limit more or less inexpert forceps extractions, the better for the patients. The indications which call for interference are well established and need not be repeated here but a word of warning is necessary, namely, to insist that they be present before the instrument is applied.

The effect on the fetus of forceps delivery must not be set aside. The procedure may prove life saving in prolonged labors but attention must be directed in this connection to the extensive stillbirth studies of Dr. Elizabeth C. Tandy of the Federal Children's Bureau, who found in the first 1000 hospital stillbirths investigated, that 38 per cent followed operative deliveries, of which 35 per cent were forceps extractions. Of the later effects on those babies successfully delivered we cannot however be certain, for the neurologists are firm in the belief that subsequent cerebral disturbances in forceps cases are not uncommon.

Version is an accepted and valuable obstetric procedure. Its technique should be known to every practitioner who essays to do confinements, but its dangers must likewise be known. Properly done and under proper auspices, it is a life saving measure for the mother and often for the child. The indications which call for version have been well defined and the attendant dangers undoubtedly have been impressed upon every medical student; yet how can we honestly accept the advice that version is the most desirable procedure for rapidly terminating the second stage of labor? Why should it be terminated rapidly; why subject the baby to the probability of intracranial hemorrhage and other possible injuries and why expose the mother to unnecessary shock, traumatism and postpartum hemorrhage? The stillbirth rate associated with prophylactic version so-called is unreasonably high—admittedly 6 per cent—perhaps higher. Are the advantages sufficient to outweigh the disadvantages, is a question which might well be asked in the proposal for a more widespread resort to prophylactic version. Where the procedure is indicated, we must have the accepted criteria present, remembering that in doubtful cases a fetal head cannot be made to pass the pelvic brim more readily last than it can first. Broken bones, nerve injuries, intracranial hemorrhages and maternal damage are all too frequent to warrant a routine performance of version.

In a Philadelphia survey it was noted that 65 deaths of mothers followed attempted or successful podalic version, or 9 per cent of the total (717) deaths, and constituted 25 per cent of the deaths following operative delivery in women over 28 weeks' pregnant. The version incidence in all the Philadelphia hospitals during this three-year period was 6 per cent. Death was ascribed to shock and uterine rupture in 33 per cent of the fatal cases, to sepsis in 20 per cent and to hemorrhage in 7 per cent. The doctors' jury felt that 50 per cent of the deaths were avoidable—mostly errors in judgment and technique.

Similar conclusions are found in other critical studies and therefore the procedure while valuable must remain limited in its application and be surrounded with the accepted precautions, if we are to reduce its dangers.

Cesarean section is generally regarded as one of the greatest present-day advances in obstetric practice. There is no doubt about its life-saving character. It has come to be a popular procedure even in the mind of the laity. But is it entirely safe under average conditions? Outstanding operators in well equipped institutions report excellent results in large series of cases for both mother and child. These favorable results have been seized upon by the tyro in obstetrics as an encouragement to proceed likewise, but frequently with a much less favorable outcome. The operation is not very difficult; it provides a dramatic picture, but what are the final results? We must not judge them by those of the highly experienced and expert operator who reports a large and successful series of cases, but rather by what the average obstetrician is capable of doing.

It must also be noted that in recent years the incidence of this operation has increased greatly, so that from two to five per cent of all births in many hospital series are completed by this means. If we take into consideration, however, the statistics of the operation for the entire country, it is quite evident that the operation is by no means as safe as some of its enthusiastic proponents believe. Careful studies on the subject are not available and demand our attention. For example, in the New York Academy report on maternal mortality, we find that among 1,564 deaths occurring in pregnancy, exclusive of those after abortion or ectopic gestation, there were 310 which followed cesarean section, or a percentage of 19.8 per cent of the total. It is furthermore of interest to note that infection constituted the principal cause of death in almost 50 per cent. Sixty-five women die as the direct result of shock; twenty-four from toxemia; twenty-three from hemorrhage; nine from embolism; one from puerperal psychosis; and forty from extra-puerperal causes. The committee which passed judgment on these cases felt that in only 54 of 300 cases could the death be considered nonpreventable. The great majority of the remainder were attributed to faulty judgment or lack of skill on the part of the attendants.

We must not forget moreover that with all types of cesarean section, subsequent sterility is frequent, that later pregnancies often terminate in abortion, that the uterine scar is an unknown quantity and liable to rupture, so that early hospitalization and careful watch during labor is essential.

It must be evident from the foregoing that cesarean section constitutes one of the most serious and dangerous obstetric operations and it is essential that a knowledge of these dangers be more widespread. It is not an operation for the tyro, the indications must be carefully measured, the environment must be appropriate. The ready resort to cesarean section must be checked if we are to avoid the deplorable results reported from numerous sources. In other words, it is not an easy way out of a difficulty and its performance must be well considered and ably carried out.

This brief outline of the most frequently employed methods of operative delivery might readily have been expanded. There is enough evidence on hand to warrant the dissemination of a general warning that operative short-cuts to delivery are not free from risk and danger, and that while we have only referred to the fatalities, there must also be taken into consideration the fact that morbidity may be present to a degree which has not as yet been satisfied. Infections of the birth canal particularly, that do not proceed to a fatal issue, leave in their train crippling symptoms and conditions that may bring about a state of incapacity in a woman, lasting many years.

All in all, it would seem appropriate that the knowledge now on hand should be more widely spread and that due consideration be given to indications for operation in obstetrics, as elsewhere, before these are attempted. Whether this additional knowledge shall be obtained through the medium of further educational measures, or whether it shall limit itself to a call on the obstetric conscience, is something which the profession will have to decide for itself. At any rate, we may safely say, conservatism in obstetric deliveries should furnish us with an important weapon for reducing our puerperal mortality and stillbirths. And when I make this statement it is without any idea of belittling the progress which has been made in operative delivery. But it is necessary to stress the fact that if undertaken, operative interference in the course of labor can only be carried out with even a fair degree of safety by skilled, well trained and competent men. Where this is lacking, a call for help is indicated, which must be timely in order to insure the best result. This should and can be practiced with benefit to prospective mothers and with glory and satisfaction to the doctor and if it is, we may look forward to a reduction in our still too unjustifiably high mortality rates associated with pregnancy.

In addition to operative deliveries as factors in producing high puerperal mortalities, we must also consider other causes of death. As already stated, toxemia, hemorrhage and sepsis still account for many fatalities in which operative interference does not enter. Let us discuss these briefly.

TOXEMIAS

There is quite general agreement that the occurrence of that formerly large group of pregnancy disturbances usually designated as the toxemias, has greatly diminished. This applies particularly to those fulminating manifestations known as eclampsia, which claimed not only many mothers but equally many babies. For purposes of comparison, the annual mortality rates for "puerperal albuminuria and convulsions" in the U. S. Registration area may be quoted. For the period from 1921 to 1925 the average per 1,000 live births was approximately 17; from 1926 to 1929 it was 15.4; from 1933 to 1935 (all inclusive) it was 11.2. However, in 1936, 22.9 per cent of all deaths recorded, were ascribed to the various toxemias.

It is generally assumed that improved prenatal care, including the timely recognition of disturbance, accounts for the improvement, although one may also claim that the more conservative handling of the patients is an important factor. There was a period less than two decades ago when radical methods of delivery held sway in eclampsia, including the now generally abandoned accouchement force, vaginal and abdominal cesarean, bagging and other procedures. Now we expect to avoid eclampsia by proper hygiene and diet, by noting the information gained from urinalyses and blood pressure observations and, in the event that actual eclampsia does develop, by the use of sedatives, narcotics and eliminative measures, making actual delivery a secondary consideration. However, the handling of the toxemia problem is by no means a settled fact and until we know the real cause it cannot be.

Prophylactic measures in so far as known, have reduced the incidence of the convulsive type of eclampsia yet we meet with a considerable number of fatalities. As already stated, the rates have been reduced from 16.3 per 10,000 live births in 1930 to 11.2 in 1935. The conservative measures advanced by Stroganoff have been followed by others, all depending more or less on the administration of sedatives and narcotics, resort to surgical interference being practiced only as a last resort. The line of demarcation is often difficult to decide but where surgery can be applied, shock, hemorrhage and sepsis may be looked for as complications in a considerable number of cases. Inhalation anesthesia seems to constitute a particular danger and especially if cesarean is undertaken, preference should be given to local anesthesia. But where skillful interference is impractical, the continuation of medical measures often is followed by an easy delivery.

HEMORRHAGE

Puerperal hemorrhage with sepsis and toxemia has constituted for many years one of the triad responsible for the majority of puerperal deaths. The average rate in the United States from 1930 to 1935 as noted in the Federal census, has been between 6.9 and 6.4 per 10,000 live births, and in the latter year hemorrhage accounted for 10.9 per cent of all fatalities in pregnancy. The rate for placenta previa has been about 2 per 10,000; in the other hemorrhages about 4.5, with inconsequent variation during this five-year period. It is also of interest to note that the increased use of analgesics in labor has had a tendency to increase the incidence of postpartum bleeding and that many institutions are not sufficiently well equipped to give adequate transfusions. The use of oxytocics alone is evidently insufficient unless timely, and unless care is employed. The intravenous use of the pituitary extracts and the crystalline derivatives of ergot should become more widely known.

It has been shown that the increase of puerperal infection rises with the blood loss and that anemia predisposes to postpartum bleeding. Hemoglobin readings during pregnancy therefore are very important. Mismanagement of the third stage, placental separation and uterine atony account for many hemorrhages and anesthesia plays an important role.

As placenta previa causes many fatal hemorrhages, its early recognition is essential. The timely employment of cesarean section, when this can be done, is accepted today as the ideal method of delivery, supplemented by adequate blood transfusion. Where hospitalization is not possible, resort to Braxton-Hicks version through the perforated placenta, plugging the rent with the child's leg and awaiting slow delivery under constant watching, will remain as the only feasible procedure. It is one of those unfortunate situations which must be dealt with to the best of one's ability, remembering that rapid delivery may result in serious injury to the soft parts with added bleeding.

Blood transfusion constitutes the sheet anchor in handling hemorrhages; unfortunately, it is not always available.

SEPSIS

As this complication of pregnancy continues to be the most frequent cause of death we must permit ourselves a brief critical analysis of the present-day knowledge of septicemia as it affects obstetric practice. The Federal Census shows that in the years from 1933 to 1936 inclusive, puerperal septicemia, including septic abortions and ectopics accounted for about one quarter of pregnancy deaths. Septic abortions and ectopics accounted for somewhat less than one-half the total. Comparing these figures with those of two and three decades ago we find little change.

The epoch-making discoveries of Semmelweiss, Lister, Pasteur, and Holmes served to demonstrate that puerperal sepsis is essentially a wound infection and that it is contagious. The development of bacteriology as a science confirmed earlier clinical observations and brought about more effective handling of surgical wounds and we may well inquire whether this knowledge has been transferred to obstetric practice. Of course it has in great part, but a more widespread acceptance of the aseptic or antiseptic handling of maternity patients still leaves much to be desired.

Practically all known pathogenic bacteria and many non-pathogenic organisms have been regarded as etiologic factors in the production of puerperal sepsis. The idea that sapremia is the underlying factor in certain cases of puerperal fever may now be discarded in view of the demonstration of anaerobic culture methods of numerous pathogenic organisms. Whether infections are an open wound from without or through exacerbation of an already existing infection in the body, is less important than the admission that in most instances they are avoidable or preventable in some degree at least.

Enormous reductions in the incidence of puerperal infection resulted in the post-Semmelweiss-and-Holmes periods from rather simple prophylactic measures. Why cannot we reduce the more or less constant 25 per cent incidence of the present day? As already stated, septic abortions constitute a considerable proportion. The number of criminally induced cases will not be affected as long as the professional abortionist is permitted to operate but, for the remainder, we must be prepared to acknowledge the efficacy of conservative, mainly non-operative methods of treatment of sepsis, so amply demonstrated in numerous and large out-patient hospital series.

In view of what is known of the causes of puerperal infection it must be self-evident that prophylactic methods constitute the most important place in treatment. Perhaps it is needless to review these, but the question may be asked do we apply accepted knowledge as widely as we should? It would be trite to state that less infection follows normal labor than it does where interference is practiced as a matter of choice or necessity. The constantly increasing number of hospital deliveries is accomplained, as a matter of record, by a higher incidence of operations and a consequent addition to the number of infections. Another factor to which insufficient attention has been drawn is the larger number of personal contacts to which the hospitalized patient is subjected, possibly carriers of pathogenic organisms—doctors, nurses, ward and operating-room attendants. If we are to favor hospital confinements, complete isolation of obstetric patients is essential and the environment must not contribute to possible infection. Well established rules for the conduct of maternity services have been promulgated by authoritative bodies. Are they followed and have communities taken the necessary measures to carry them out? It would appear from the record that laxity is still prevalent. Whether the frequent and perhaps unnecessary resort to operative termination of pregnancy and labor can be curbed, must remain a matter for the exercise of an obstetric conscience. We may safely claim, however, that the following elementary principles will accomplish much in reducing the incidence of puerperal infection—(1) maintenance of strict asepsis by obstetrician and nurse throughout and after delivery; (2) restriction of vaginal examinations and these to be done with accepted precautions; (3) immediate repair of perineal lacerations; (4) resort to operative interference only under strict indications and carried out with the necessary skill and under proper environment.

Should sepsis develop and, unfortunately, we must acknowledge this as a possibility even under the best circumstances, conservatism is the key-note of treatment. Radical measures, especially curettage of the puerperal uterus, are contraindicated as are all other intrauterine manipulations, which may merely open up fresh channels of infection by breaking down the barriers of protective granulations. We know how quickly pathogenic organisms enter the blood-stream, they are soon beyond the reach of a curette. It is important to develop and conserve the natural resistance of the patient, but curative sera, blood stream antiseptics and a legion of other suggested measures are less important than prophylaxis. It is too soon to decide upon the value of sulphanilamide, the latest suggestion in treatment—this may prove an ideal remedy under proper circumstances.

STILLBIRTHS

One cannot discuss the question of conservatism in obstetric practice without referring to the stillbirth situation in this country. The necessity for proper definition and registration of stillbirths has been stimulated both by federal and local agencies in recent years. The Bureau of the Census has found that during 1934, over 78,000 stillbirths occurred in the United States as compared with about 2,100,000 live births, or a rate of 3.6 per 100 births. In practically all of the states from which these figures were obtained, the fifth month of pregnancy was accepted as the lower limit of the period of gestation attained. Abortions and early miscarriages are not included. Further studies on a large scale of the causes of these stillbirths are under way and the results of the first 1000 cases are available in part in a publication by Dr. Elizabeth Tandy of the Federal Children's Bureau, already referred to. Two hundred and sixteen hospitals scattered throughout 26 states, in which over 23,600 women are delivered annually, co-operated in the investigation. Of the 1000 stillbirths investigated 62 per cent were delivered spontaneously and 38 per cent by operative procedures. Forceps operation constituted 35 per cent and was the most frequent; breech extraction was second with 25 per cent, version and extraction third (14 per cent) and cesarean section fourth, with 12 per cent. It was claimed, however, that among the operative cases, the fetus was dead before operation in 73 per cent. Although one may question the latter figure as presenting a more favorable aspect than is ordinarily believed, yet, even if granted, it still leaves 27 per cent of the fetuses alive before operation was started. We cannot draw final conclusions from a study of 1000 cases but if we can multiply this by 78, the grand total of stillbirths during a single year, we should have some definite evidence, among other things of the effect of radical obstetric procedures which have become so widespread in recent years. The entire question of stillbirths and their causes have received relatively little attention. During the past fourteen years the ratio of stillbirths to live births, in the original birth registration area, has been reduced less than 16 per cent, whereas the infant mortality rate has declined more than 38 per cent. The subject has frequently been dismissed by the broad statement that the causes responsible for this high mortality among babies are beyond control. In view of the fact that the outstanding etiological factors are syphilis, toxemias and birth injuries, it should be possible to reduce this number, because the fact is now generally accepted that the conditions mentioned are largely preventable. It has been claimed that at least 60 per cent of such cases are due to abnormalities and difficulties encountered during birth. Are we to admit that poor obstetrics is primarily responsible?

HOME DELIVERIES

The tendency to and popularity of hospital confinements has already been referred to. I desire, however, to call renewed attention to the possibility of successful domiciliary care even under adverse conditions, because, in this widespread country of ours, with its many large centers in which adequate hospital facilities are obtainable, there still exist circumstances under which the confinement of women in their homes is necessary and perhaps desirable. In view of the good results which have been obtained in various places due attention must be accorded to the methods employed in the hope that a more general application of the principles of treatment employed may prove a factor in the reduction of the national maternal death rate. A few outstanding examples of supervised home maternity care may be referred to in this connection.

The Chicago Maternity Center has presented recently a four-year report ending with June, 1936, which deals with approximately 12,600 indigent cases in the city of Chicago. These women were confined in their homes by a group of carefully supervised doctors, medical students and nurses with a total mortality of 18, or 0.142 per cent. Among these, sepsis and toxemia each accounted for 4, postpartum hemorrhage for 2, tuberculosis for 5, pneumonia for 2, and meningitis for 1 death. In other words, 11 died from obstetric and 7 from nonobstetric causes. Twelve of these women delivered spontaneously and in only one was there operative interference. In five cases no prenatal care had been given. During this four-year period out of over 14,000 patients in the service 556 were hospitalized for some complication of pregnancy, or 4.4 per cent. It was necessary to hospitalize 150 women after delivery. Thirty-three hundred complications of pregnancy occurred in the entire series, and 673 operative deliveries were performed in the homes, an incidence of about 6 per cent. Among patients sent to hospitals a low cesarean section was done in 76, or an incidence of one section in every 154 deliveries.

At the Lobenstine Memorial Clinic in New York City, which operates in a limited tenement house district, a recent report shows that in 1000 home deliveries conducted by midwives and midwife pupils under medical supervision only one death occurred, that from sepsis in a neglected case. It was found desirable to refer 81 additional patients to hospitals for a variety of medical reasons, all of whom were successfully delivered.

At the old Lying-in Hospital in New York figures are available over a considerable period of years. Approximately 3,000 women annually were confined in their homes with very low mortality rates. The operative incidence varied from 6 to 12 per cent, mostly curettages for incomplete abortion, median and low forceps and versions. It must also be noted that the morbidity rate basing this on rise of temperature and other complications was usually less than 2 per cent.

The Frontier Nursing Service conducted in the mountains of Kentucky by the organization over which Mrs. Mary Breckinridge presides, has had an equally favorable experience with home deliveries done under the most adverse circumstances.

A study of the essential factors which contributed to these good results shows that trained obstetricians were more or less in direct charge, that there was constant attendance by competent people, that there was a minimum of operative interference, that actual isolation was really provided for, and that hemorrhage control was exercised.

These results in what might be called institutional home delivery services can undoubtedly be matched by experiences of private practitioners over the entire country and serve to direct attention to results which match more than favorably those obtained in hospitals. It is admitted, of course, that hospitals receive more complicated cases, but a study of their records also shows a greater incidence of operative interference, and perhaps an equal if not greater incidence of sepsis and hemorrhage.

There is one final topic which I want to discuss in relation to obstetric procedures, namely population maintenance. It might appear that this topic is of academic rather than medical interest, yet I feel that my closing remarks can be devoted to no more pertinent subject than the influence, both direct and indirect, which modern obstetric practice may wield on the question of maintaining our population on an even keel. Within recent years numerous, careful observers have called attention to the diminishing birth rates in various countries of the civilized world;—England, France, Germany, Italy, among others, and now the United States are viewing with alarm the notable reduction in their birth rates. Elsewhere there may be an interest in securing more human material for military forces, but that argument scarcely applies to us. However, it is necessary for the happiness and prosperity of any country to maintain a definite rate of growth. Diminution or even a static stage is a serious matter. Birth rates and death rates are approaching each other in the United States and in 1936 it was estimated (Statistical Bulletin, Metropolitan Life Insurance Company, December, 1936) that the excess of births over deaths would be expected to touch the lowest point yet reached in this country, namely about 5 per thousand.

The rate of natural increase is diminished by (1) a record low birth rate and (2) a death rate which, though still favorable, is nevertheless higher than any experienced in the last five years. These figures are based on provisional data covering about 35 states, comprising over 67 per cent of the population, in which the birth rate was 16.5 per thousand and the death rate 11.5 per thousand. The corresponding figures for 1935 were 16.8 and 10.9 per thousand. Thus, the birth rate in 1936 fell by 1.8 per cent and the death rate simultaneously rose by 5.5 per cent from last year to this. If we go back further, this decline becomes even more evident and it may be that within a comparatively short time our vital statistics will show that we are on the red side of the ledger. There are various reasons for this condition. The voluntary restriction in the size of the family by contraceptive practices is a foremost factor. Added to this is the reduced fertility which accompanies advancing civilization and is dependent upon a variety of social and economic factors. But we as physicians have a definite responsibility in aiding to preserve a population balance by conserving as far as we can the lives of women who are bearing children and to reduce the toll of abortions and stillbirths. This represents pregnancy wastage; it is our duty to prevent it or at least reduce it to the limit of our abilities.

CONCLUSIONS

The foregoing rather broad analysis of obstetric procedures and trends brings us squarely up to the question as to what we can and what we should do to reduce what is so widely regarded as an unjustifiably high puerperal death rate in this country. However, no matter how we go about it, it is well to remember that the individual physician is the keynote and therefore the important factor, both in his personal as well as in his community responsibility. Shall we as doctors be driven to do something in response to the criticism which has been levelled against us by the public and the lay press, or shall we take voluntarily the necessary steps to bring about the necessary reform? We cannot disregard this demand on the part of the public, although it is essential that we differentiate genuine sentiment from the all too evident hysteria associated with the subject. I am convinced that the public will respond to any earnest effort on the profession's part which does not cloak the facts. There are well established standards for pregnancy care both for the individual practitioner and the hospital which, if followed, will prove a potent factor in reducing the morbidity and mortality of childbearing.

Summarized, these briefly are as follows: 1. Adequate prenatal care, which is largely hygienic, but must include a thorough physical examination, fairly frequent simple urinalyses, keeping track of the body weight, early Wassermann or similar tests, blood pressure observations, a hemoglobin reading, and above all and most important, a sort of stock taking or physical estimate of the particular patient's ability to go through her labor successfully. I admit that the latter is somewhat of a gift. It is something which cannot be taught in the medical school, it must be acquired by experience. Unfortunately, too few teachers themselves recognize this or refer to it in their lectures; however, I believe it is of equal, perhaps greater importance than a knowledge of blood chemistry and pelvic measurements. It is only through an evaluation of physical findings developed by early and fairly frequent prenatal visits of patient to doctor and clinic, that this pertinent knowledge can be developed, safety guaranteed to a large degree and many tragedies averted.

2. A thorough knowledge of the physiology of pregnancy and the mechanism of labor is essential for the prompt recognition of

deviations and abnormalities as these may arise. Repeatedly we find in the various maternal mortality studies that the fatal outcome in many instances could be assigned to a lack of knowledge on the part of the doctor, or often of the patient, as much as upon incompetency, error or lack of judgment. When failure of the natural expulsive forces of other conditions apparently or actually call for interference, it is of greatest importance to know how and when to interfere. Our maternal death rates would be lower if these dicta were more widely accepted and practiced. Conservatism does not mean necessarily a do-nothing policy, it does mean weighing carefully in each case the signs and symptoms of possible impending trouble and applying the proper remedial measures at an early and not late stage in the process of labor. This can be brought about by a spirit of co-operation between patients, doctors, consultants and hospitals, the carrying out of which often resides in community efforts.

3. Environment plays an important part in the safe conduct of labor. Hospital confinements have increased in great numbers in the last 30 years. Undoubtedly they contribute to the possible comfort of the patient and the doctor. This movement must be regarded as one of the tendencies of the day; it has much in its favor, but can we apply the system universally? The failure to lower puerperal death rates during the period when hospital confinements have become so prevalent, might prove an argument against the practice. However, it would be an error to condemn hospital obstetric practice unreservedly on the one hand or to hold it up on the other, as the only desirable method. Home deliveries must continue as a part of the routine of general practice in many communities and this should prove in the best interests of the patient. For, resort to a hospital does not imply safety. There are good hospitals and there are many poor hospitals, ill equipped and ill managed, but aside from this, they offer that opportunity for ill-timed and often incompetent interference which spells invalidism and perhaps death in many instances. The good results met with in normal cases in out-door maternity services, conducted very often in unfavorable surroundings, show quite definitely what can be done.

I have attempted in outline to discuss the general subject of the mortality associated with childbearing with a view to its conservative handling. There are many angles which I could not bring out. I have avoided the presentation of detailed statistics but have ventured to discuss the problem from a broader point of view as it affects the general practitioner of medicine, who is responsible for so much of the maternity care of this country. I have not considered the midwife, much as she enters into the picture, or the widely disseminated abortion problem with its many fatalities. All of this would require more time and even more patience. I trust, however, that I have called sufficient attention to the fact that improved conditions can only be brought about by co-operation dependent upon close relations between all the factors concerned, namely the patient, the doctor, the hospital, and the community. It is only by this broad recognition that we can hope to achieve the final result of placing obstetrics in the forefront of American medicine.

And this brings me back to my original question: is modern obstetric practice to be credited with any improvement in the care of pregnant women? I believe it can be. Progress is noteworthy but, we must admit, it is progress in a limited sense, if we are to judge it by the puerperal mortality rates. Advances in obstetrics in the last half century are outstanding, such as the handling of syphilis and tuberculosis in pregnancy, the use of narcosis and analgesia in labor, a better knowledge of toxemia and the control of septic infection, improved operative technique, especially of cesarean section. But essential improvements must be carefully separated from what Rudolph Holmes so aptly designates the "fads and fancies" of obstetrics. The essentials evidently have not been disseminated as effectively as they should and the reasons for this constitute the outstanding problem in this field at the present time. It is for the medical profession to find an appropriate and satisfactory answer.

Prevention of the Pneumonias*

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THIS PAPER is the first of two dealing with the pneumonias and projected for the winter of 1938-1939. This one deals with the prevention of the disease, the other with treatment of persons sick with it.

It was not the original plan to offer you this paper at this time. You realize the difficulty in fixing the attention on a cold weather disease when the thermometer registers something over one hundred, but physicians should anticipate their patients by a few months. When your patients begin to think about the prevention of pneumonia next December, you can say to them, "I figured all that out last summer while you were sitting on a block of ice eating watermelon."

In this audience there are some county health officers and some industrial physicians who will think of the subject in terms of mass action. In the main you are family physicians who anticipate that before many months families and individuals who look to you for medical guidance will be asking you what can be done to escape pneumonia. The object of this paper is to help you to an answer.

IMPORTANCE

The pneumonias are the most important of all the infectious diseases. The annual death rate per 100,000 attributed to the pneumonias in the United States since 1911 but exclusive of 1918 has been around 135. This is 1.35 per cent per 1000 or about one tenth the deaths from all causes. That number is only exceeded by the number of deaths from heart disease and the cancers. The next highest infection disease is tuberculosis and that is far below the pneumonias. Typhoid fever, diphtheria, scarlet fever, smallpox, infections on which we spent so much and expend so much energy and planning to prevent are trifles as compared with the pneumonias.

I am indebted to Dr. Whitfield, Registrar of Vital Statistics of the State Board of Health, for the pneumonia figures for Mississippi for 1937.

These show the total number of deaths from all pneumonias for all ages to have been 1850, or a total death rate of 83.3% per 100,000. This is considerably below the general all pneumonia death rate for the United States. This state now has a pneumonia death rate that is low enough to entitle it some consideration as a resort state against pneumonia in the peak period. Further analysis should show that the south half of the State has so low a pneumonia death rate for whites as to give it good basis for becoming a resort region in the pneumonia peak season.

Vigorous effort at control should materially lower these rates. When the all pneumonias fatality rate is split into months we find the monthly rates as follows:

	Total Deaths	Deaths per day	Rates per 100,000
March	299	9.64	134.5
January	274	8.64	123.3
February	270	9.64	121.5
December	268	8.64	120.7
April	240	8.	108.
November	151	5.03	68.
May	107	3.56	48.2
October	97	3.23	43.7
June	49	1.63	22.1
September	46	1.53	20.7
August	44	1.41	19.7
July	36	1.16	16.2

Low is July with 36 deaths, an average of 1.16 deaths a day and a rate of 16.2. High is March with 299 deaths, an average of 9.04 deaths a day and a rate of 134.5. The daily rate in March is more than 8 times that of July. The January monthly rate for Mississippi is the only monthly rate in Mississippi which is higher than the yearly rate for the United States.

The pneumonia year in Mississippi divides itself into 3 periods:

The high period extends from December 1st to April 30th, five months. During this period there were in 1937 a total of 1351 deaths (out of total per year of 1850). Number of deaths in average month 270. Number of deaths daily (average) 8:95, rate 119.6.

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*Read before the Northeast Mississippi Medical Society, Amory, Miss., Sept. 20, 1938.

The low period extends from June 1st to September 30 — four months. Total deaths 175. Number per month (average) 43.1. Number deaths daily (average) 1.43, death rate 19.9.

The transition period—period of increase and subsidence—May, October, and November, 3 months. Total pneumonia deaths 355. Average number per month 118.3. Average number of deaths per day 3.94, death rate 53.3.

The distribution by age periods per age distribution of population is as follows:

Age: Years	Total pneumonia deaths per year	Death rate per 1000,000
Under 1	313	686.2
1-2	90	189.
2-3	36	75.6
3-4	16	33.6
4-5	10	21.
Total 5 years	471 (94.2)	197.82
5-9	49 (9.8)	20.8
10-14	41 (8.2)	18.
15-19	81 (16)	36.4
20-24	94 (19)	47.
25-29	105 (21)	66.
30-34	76 (15)	60.3
35-39	102 (20)	88.7
40-44	74 (15)	64.9
45-49	100 (20)	112.2
50-54	106 (21)	117.7
55-59	78 (16)	142.
60-64	96 (19)	192.
65-69	108 (22)	400.
70-74	86 (17)	344.
75-79	73 (15)	No age distribution of population available
80-84	73 (15)	
85-89	30 (6)	
Over 90	20	

The heaviest death rate from pneumonia is in children under 1 year of age, the rate being 686.2 per 100,000. Other high rates are 1-2 years 189, 2-3 years 756, 70-75 years 344, 65-69 years 400, 60-64 years 192, 55-59 years 142. A low rate of 18 is obtained in the 10-14 year age period. A drive to reduce pneumonia fatalities should be directed to age groups 3 years and younger and age 45 and older. However, even as low a rate as the 18 of the 10-14 age period would be accounted a community disgrace as well as a great menace to life if the disease under consideration were typhoid fever. Since pneumonia is fairly rare in the tropics and increases in severity as we go northward we may look for a lower rate in Gulf-bordered South Mississippi than in its northern counties.

An analysis of the figures supplied by Dr. Whitfield for the years 1935-36-37 shows that the counties south of Jackson had pneumonia fatality rates that were but a trifle lower than those of the more northern counties. If corrections for distribution of population into whites and blacks and for ages were applied even this trifling advantage should disappear. In spite of this showing the Gulf portion of Mississippi has the better chance of achieving a low pneumonia rate and becoming a resort region for those who would escape the disease.

Cecil[1] says that 75 per cent of the deaths from pneumonia are in persons under 65 years of age, 25 per cent in persons over 65. The age of maximum prevalence is 63.

These figures are interesting but there are some points that affect their importance. The terms pneumonia, heart disease and cancer as used in mortality statistics are too general and usually are too inclusive. The term heart disease includes most of the diseases of one vital organ.—not true of any one term applied to any other important organ. There are many kinds of cancer and in many locations

In an effort to improve statistics there is a tendency to substitute the term "all pneumonias," dropping lobar and broncho. That represents a gain but a closer study of pneumonia necessitates that we omit from our consideration certain pneumonias or deaths reported as such. Of first importance is that we drop from consideration those cases called pneumonia because of carelessness or a desire to conceal. We know practically that pneumonia is a death certificate hodge podge. If we don't know what else to write we write in pneumonia. As a rule it is a cause of death that is not questioned and that makes no trouble with insurance people or coroners or health departments and satisfies friends.

Another bad practice is to ascribe deaths in the aged to pneumonia, also deaths from whooping cough and measles. Hypostatic and terminal pneumonias and other forms of secondary pneumonias tend to vitiate pneumonia statistics. Surgical pneumonias are important but in a study of endemic pneumonia they need to be excluded from most studies. In times of pandemic influenza it is wise to use the terms influenza and influenzal pneumonia but at all other times the terms should be dropped since they only lead to confusion.

ENDEMIC PNEUMONIAS

The subject discussed here is endemic pneumonia or the pneumonias which occur in all parts of the country and in all seasons of the year, fluctuating in prevalence, being low in summer and peak in winter, spring and are not terminal, secondary, surgical or influenzal.

Even thus limiting the pneumonias we find the disease is certainly the most important of all from the public health standpoint. The relation of the pneumonias to the common cold and to influenza, each a public health problem of major importance, increases their importance.

It is true the pneumonias are of short duration and terminate in death, or prompt uncomplicated complete recovery and by reason of these qualities are less important than consumption, cancer and heart disease. But these are other considerations. How much more important are the pneumonias than smallpox, measles, typhoid, diphtheria, and whooping cough, other short duration diseases that have the attention of physicians and health departments.

PREVENTION OF ENDEMIC PNEUMONIA

Efforts to prevent pneumonia will be considered under two heads:

A. Indirect methods, most of which concern environment.

B. Direct effort or vaccination to produce temporary immunity to pneumonia and in some measure colds, such immunity to last through the pneumonia season.

Indirect methods will be considered under the heads: latitude, altitude, climate, season, smoky, dusty, dirty air, winter sports, housing, vitamins, obesity, alcoholic beverages, operations, clothing, crowds, hardening, infections and colds.

Latitude: Epidemics of influenzal pneumonia are not greatly influenced by latitude. No so the ebb and flow of what we term endemic pneumonia. This disease, other things being equal, causes a lower death rate as we approach the equator. Cecil[1] says, "Pneumonia is a disease of the temperate zone although it may occur in the tropics."

I have already suggested that the epidemiologic and vital statistics divisions of health departments supply us with pneumonia death rates from which have been refined out terminal pneumonias and other forms that complicate study of the problems of endemic pneumonia control. I now suggest that they supply figures showing rates in three latitude groups to-wit: Degree 35 and south thereof, area between degree 35 and degree 40, and degree 40 and north thereof.

The Indiana Health Department many years ago in striving to control typhoid and diarrheal diseases divided their state statistically into Northern, Southern, and Central Indiana and gained thereby. Already large numbers of people migrate as the pneumonia season comes on from a region of high to one of low pneumonia prevalence. Avoidance of pneumonia is one reason for such migration. Information as suggested would supply a more intelligent basis for such temporary migration.

I suggest that this society ask the State Board of Health to make the following changes in methods used in the Bureau of Registration:

For the purpose of facilitating the study of pneumonia that the State be divided into two zones, to-wit: counties north of an east and west line through the south line of Hinds County and that comparative study of pneumonia prevalence be made in the counties north of that line with those south of the line; and to make their figures more accurate that they drop the use of the word influenza except in pandemic years to the same end that the anatomical division of pneumonias be dropped, substituting the term pneumonia; and that they make pneumonia reportable by putting it in the immediate report group.

By doing this it may be possible to find figures that will attract those who migrate to avoid pneumonia to come to Mississippi, at least to the southern part of the state. One method of pneumonia prevention is to spend the peak season in latitudes, altitudes, and other locations where endemic pneumonia does not prevail to a great extent.

Altitude: Closely related to latitude from the pneumonia standpoint is altitude. It has long been accepted as a clinical truism that a person sick with pneumonia at a high altitude will have a fairer chance to recover if he can get to a lower altitude. That is considerable basis for the opinion that a person is more liable to contract pneumonia when living at a high altitude as compared with his chance at sea level. In altitudes on cloudless days there is a diurnal variation in temperature of from forty to fifty degrees. In the Rand Mine region in South Africa the altitude is more than six thousand feet and the consequent diurnal variation in temperature is one of the reasons for the high pneumonia rate. People who live in altitudes will lessen their chance of contracting pneumonia at the peak season if they will spend that season at the sea level. People who live at low altitudes should avoid high altitudes in the pneumonia season.

Climate: Other factors enter into climate beside altitude and latitude. Among these are wind movement, cloud, fog, rainfall, hours of sunshine, quality of sunshine, relative humidity, variations in temperature. Cole[2] says, "In the climate factor it is the relatively quick change in temperature which counts."

Lister and Ordman[3] agree with Cole that the chief climate factor is quick change of temperature. They add two other climatic factors, change of season from winter to spring and autumn to winter and low atmospheric humidity. They discuss in a satisfactory manner the epidemiology of pneumonia in South Africa including seasonal prevalence of the disease, climate, diurnal variation in temperature, humidity, periods of rainfall and drought and changes from winter to spring and autumn to winter. Climate influences the prevalence of pneumonia. A small proportion of the population are in a position to make use of differences in climate as a means of escaping pneumonia.

Season: In the northern hemisphere the pneumonia season is on the horizon in December, runs rampant during January, February, and March, and yields grudgingly in April. Between May 1st and December 1st the disease is not much of a menace. A few people are in a position to dodge pneumonia by running across the equator and thus swap seasons.

Smoky, dirty air: The exceptionally high death rate from the pneumonias of Pittsburg is proof that atmospheric impurities are a prominent factor in the prevalence of pneumonia. Haythorn and Miller[4] say that the Pittsburg death rate is higher than that of Pennsylvania as a whole or the whole of the country. Figuring two days as the incubation period of pneumonia and eight days as the average duration of fatal cases they estimate that 8 to 10 days elapse between the period when bad atmospheric conditions should cause an increase of pneumonia deaths if the two are related. They think that using this yard stick they were able to establish that smogginess of air or smog was a factor in the production of pneumonia in Pittsburg.

Air has somewhat the same quality in all heavy industrial districts particularly when such districts are located in a region of hills and valleys. A few years ago there was an alarming outbreak of a somewhat mysterious nature in the industrial district in western Germany. Persons who would escape pneumonia should avoid the Pittsburg district and similar districts during the pneumonia season.

Winter sports: In Switzerland, Canada, the Adirondacks and some other parts of the world there has been a marked growth of the winter sports movement. Escape from pneumonia is one of the reasons, though not a main one, for winter sports. Such sports are conducted in cold climates and usually in mountainous areas. Indulgence in such sports is a hardening process calculated to build up resistance to acute respiratory infections. The gain in this direction is more than enough to offset the harmful effects of high altitude and latitude. However there is a growing tendency to develop a spectator or onlooker class who claim to be participating in winter sports. In Switzerland medical writers warn against sitting by a warm fireside, inside a closed, glass-covered space, while observing and discussing the participants and regarding themselves, the onlookers, as taking part in the health giving exercise. There is a definite certain pneumonia menace in making a part of a large indoor audience, attending an ice carnival, ice polo match, ice hockey or snow carnival.

Persons lessen their chance of pneumonia if properly clothed and otherwise protected by participating in winter sports. They increase their chance of contracting the disease by being onlookers.

Chilling, wetting and "hardening": There is a strong consensus of opinion that the chief precipitating cause of pneumonia is chilling or wetting or both. The evidence on the subject is very loose. Beyond doubt a profound vasomotor shock due to either or both of these causes is often the immediate contributing cause to the pneumonic infection. If the temperature of the mucosa of the upper respiratory passages is lowered or if vasomotor balance gets out of control, pneumonia is liable to follow. All such degree exposures should be avoided or the effects remedied with some promptness.

At the same time mild exposure to wind and weather have been over-worked as explanations of attacks of pneumonia. Precautions against such exposures often do more harm than good.

Hardening as a measure of pneumonia prophylaxis has its advocates and it also has those who disbelieve in it. Hanger[5] is one of those who have little faitn in it. There is an apparent contradiction between the philosophy of hardening and that of chilling in their relations to pneumonia but the contradiction is more apparent than real. Hardening is a training process intended to prevent the vasomotor paralysis of chilling. Until the hardening educational process is completed or advanced at least, it adds to the dangers. When it has been completed and is faithfully practiced it is one of the best preventive procedures for pneumonia and colds of the entire environmental group.

Avitaminosis and pneumonia and colds: Avitaminosis is a factor in the causation of pneumonia. This is especially true of pneumonia in children and in persons over 60 years of age. This is recognized in the considerable use of codliver oil and other vitamin D products and in the custom of pneumonia susceptibles to spend the pneumonia peak season where they can be in open air and direct sunlight for hours each day.

Obesity: The obese are more than average prone to contract pneumonia and to die from it when they have developed it. Reduction of weight as a pneumonia prevention procedure has a limited field. What the obese should do to avoid pneumonia short of reducing is of greater consequence. They will be safer if they will run from pneumonia areas and pneumonia peaks.

Alcoholics: What is said of obesity applies to alcoholics. Some alcoholics will go on the water wagon because of fear of pneumonia. More of them will run from pneumonia areas and pneumonia peaks. Some called on to choose between Pittsburg and whiskey will pass up Pittsburg. The advice given by the distillers and saloon keepers in 1918 to avoid influenza by drinking whiskey may have been good for the saloon keepers but it was hard on the people. As Bartholow said of the practice in the Army of Northern Virginia during the Civil War of issuing daily a jigger of whiskey and a measure of quinine as a malaria preventive, "It was not good either physically or morally."

Operations: Although somewhat outside the field of this paper we interject, "During the peak of the pneumonia season it is well to avoid operations of election where inhalation anaesthesia would have been used."

Clothing: We have said that chilling is a prominent contributing factor in pneumonia. In the African mines laborers are forced to undergo rapid and great vacillations of temperature as they go into and out of the mines. Some of them go to work poorly clothed at 4:00 a. m. when the air is cold. They step into an elevator cage and in a few minutes are far underground in hot air. When they quit work the process is reversed, the contrasts being even greater. The company finds it advisable to have the men wear warm clothing, sometimes even going so far as to provide warm coats which the men are required to put on when they quit work and before they enter the elevator.

Housing: When General Gorgas reported on pneumonia prevention among the Rand miners in 1914 he stressed the importance of good housing. In evaluating that report it is well to recall that most of Gorgas' experience with pneumonia had been with soldiers in barracks. A large part of the labor force in Panama in the building days had been housed in dormitories. When Gorgas and Orenstein went to the African diamond and silver mines the mine labor lived largely in compounds under almost prison conditions or in walled barrack communities where crowding and mass exposure could not be avoided. He saw the urgent need of getting away from that kind of housing. Such housing was the corner stone of his report. The conditions he reported against have been greatly improved. In the Katanga mines in the Belgian Congo they have been almost wholly done away with. To the improvement in housing Dr. Mottoule attributes all of the decline in pneumonia prevalence. He thinks he has gone further in housing improvement than Gorgas recommended. He does not think that his charges need additional protection of pneumonia vaccination. In the neighboring mines in Northern Rhodesia they have housing that is quite as good and perhaps better than that of the Katanga mines. Nevertheless Dr. Ordman thought they needed vaccination. This is in line with the opinion of Lister and Ordman who compared Rand mines where the housing was good with those where it was bad.

With us in America housing in relation to pneumonia is rarely to be compared to what Gorgas and Orenstein met in Africa except it be in some barracks, school dormitories, prisons, and jails. Our problem is more one of house climate. That house climate, good and bad, as a factor in pneumonia is unquestioned.

Crowds: In time of epidemic influenza health authorities advise people to avoid crowds and assemblies. What Gen. Gorgas was trying to overcome by his report on conditions in Africa was crowding together of men in messrooms and such even more than conditions in sleeping rooms.

If people will avoid crowds and meetings in the pneumonia season they will lessen their danger of contracting the disease.

Certain types of illness: Certain types of disease such as measles and whooping cough predispose to pneumonia and are to be avoided for this as well as other reasons.

Isolation: Cecil says that pneumonia is not autogeneous but is due to invasion from without. This opinion leads here to contact importance over environment and to prevention isolation as of first importance in prophylaxis.

A study of the literature shows that there are others who share that opinion; nevertheless, I do not think the position can be defended. I am sure health officers and private physicians would rank isolation well below several other methods of prevention.

White[6] rather opposes the view that we catch pneumonia from others, and leans toward the idea that lowered resistance is the major factor. He says, "Healthy persons may harbor pneumococci of one or more types with no harm to themselves." The mere presence in the body of pneumococcus is not sufficient to cause pneumonia; it is the constitutional factors of the host which determine whether a saprophytic pneumococcus will become pathogenic. Changes in the polysaccharid capsule are important in that change.

Cole[2] says chief reliance must be placed in isolation of the patients.

While the above authorities had in mind especially pneumonia patients, what they wrote applied also to colds. As was said above we are partly in accord but not entirely so.

Colds: Cecil[1] quotes Bellevue figures as showing that colds precede pneumonia in 32.5% of cases. In Cole's series the percentage was 40. He thinks these figures are much too low. He thinks they should be 60 to 70%. He says the surest way to prevent the disease would be to eliminate the common cold.

The Science Letter, November 20, 1937, reporting work done by Felton and the Army Medical School says, "The best method of protection against pneumonia is to avoid colds. Four-fifths of all cases start from colds." Cole says, "Pneumonia is rarely a primary disease. In most cases the pneumonia is preceded by a cold. Among contributory causes of pneumonia are colds, seasons, climates."

Of the several diseases which lay the foundation for pneumonia none other is so important as the common cold. Colds do "run into pneumonia." Unfortunately we know of no satisfactory test by which we can decide what kind of a cold is liable to "run into pneumonia." or when a cold is liable so to terminate. In consequence of our limitations the proper policy is to treat every cold which has a constitutional reaction, aching or fever or deep cough, one or all as a potential pneumonia forerunner even though such a policy is often or usually wasteful and unnecessary. When we get better vaccines, better serums and better diagnostic procedures such advice will be bad and should be withdrawn.

VACCINATION AGAINST PNEUMONIA OR PNEUMONIA AND COLDS

A half century ago it was taught that one attack of pneumonia predisposed to a second or to repeated attacks. There were people who were said almost to have the pneumonia habit. Most every text book on pneumonia makes reference to persons of this type; however, such people are rare. They do not establish a pneumonia immunity and susceptibility rule, as was once thought, but they are regarded as exceptions to rules. It has been proved than an attack of pneumonia confers a temporary immunity and on that rock efforts to immunize are built, efforts to develop a satisfactory vaccine and to bring it into general use are being carried on.

Concluding the chapter on immunization in his monumental work on the pneumoccus, White[6] gives the following verdict, "Granting the soundness of this conclusion prevention (by vaccination) as a measure for sparing the individual is not to be discussed so lightly. The very definite limitations of the method of prophylaxis such as the heterogenity of serologic types and the brief spell of immunity following vaccination are freely admitted. However, in the case of individuals debilitated by age, by effects of disturbance of intestinal function by intercurrent or chronic disease or by undue physical strain, to whom pneumonia may present an especially serious hazard, and in the case of large bodies of men assembled from many sections of the country and living for a time under crowded conditions, the protection such as it is afforded by the parenteral administration of suitable pneumonic materials, should not be disregarded. White's study of the coccus, from one chapter of which the above has been quoted, comprises about 600 pages of discussion of evidence mostly from laboratory sources and uses gathered from about 1600 books and articles. He represents fairly well the conservative opinion on the subject.

And now let us cite some opinions on vaccination from men most of whom belong in the conservative group: Cecil's opinion is, "The patient's immunity against the pneumococcus is rather high immediately after the attack but apparently it does not persist for more than a year. The immunity conferred by vaccine lasts less than a year."

White says, "The very nature of the pneumococcal disease would seem to preclude the possibility of engendering by artificial means any secure or lasting protection against invasion of the body by the pneumococcus." Immunity disappears in from 3 months to 2 years. His conclusion after summing up all the evidence has been given above.

Cole[2] says, "We know of no general measure of protection. All the efforts to decrease the prevalence of dust, to diminish crowding, to prevent sneezing, to lessen susceptibility by consuming vitamins, by avoiding fatigue or over-drinking—have little or no effect. The attack must be directly or indirectly on the specific infection agents themselves." Referring more particularly to pneumonia and colds,Cole says,"Efforts at prevention may be directed toward the chief predisposing factor. Colds (or upper respiratory tract infections) are rendering the population immune by means of artificial vaccination." He gives his opinion on vaccination as it has been practiced as follows: "It has not proved its value."

The most important report on the use of vaccines against pneumonia that has ever been made is that of Lister, Ordman and Peall[3]. The pneumonia problem in the South African mines ranks second only to their silicosis problem. For the solution of their problem they make use of vaccines as well as improvement in environment. Their experience in pneumonia control began in 1911 when Sir Almroth Wright instituted pneumonia vaccination. In 1914 General Gorgas reported in favor of improvement in environment conditions. Every man is vaccinated against pneumonia when he is hired, regardless of the time of the year. Under practical conditions this means that the protection afforded by vaccination is supposed to last approximately one year.

After they had been using the method a few years they found statistically that the vaccine had lost its power to protect. About the same time they discovered that the bacteriology of the prevalent pneumonia had changed. Streptococcus had become more important than pneumococcus. They changed the bacterial content of the vaccine so that it contained the bacteria recovered from the lungs of persons having pneumonia in the approximate vicinity where the vaccine was to be used and at the approximate time of use.

The report gives the methods of manufacture and stresses the necessity for attention to certain details. While the physiologic phases are discussed the principal value of these reports is their careful statistical proof that the use of vaccine on a large number of workers in a considerable number of mines has proved successful over a considerable period of time.

The various environmental factors are discussed and the conclusion is arrived at that the improvements in environment have not been enough to explain the decline in pneumonia prevalence.

While the negro miners during their period of employment are well under control and all phases can be statistically considered, when they leave the mines they go back into the bush where track of them is lost; therefore the statistics apply to protection against pneumonia for a period of about one year but not for longer.

While Ordman and Peall worked on the Rand with Lister they had other experiences in other parts of Africa, Ordman's as far away as Rhodesia. Their opinions are the same as those already quoted from Lister, Ordman and Peall. Incidentally Ordman's paper includes a valuable discussion of the epidemiology of pneumonia, particularly its seasonal variation.

Some guess as to the trend of opinion of Felton and the following officials of the U. S. Army Medical School may be adduced from *The Science News Letter*[7], (issued just ten months ago today) stated the following: "Vaccine prepared at the U. S. Army Medical School is now being distributed to CCC camps." The vaccine referred to was a vaccine against pneumonia and perhaps colds, the method of making which had been developed by Dr. L. Felton of Johns Hopkins University. The vaccine was to be used during the 1937-38 pneumonia season on 150,000 persons. The letter said the vaccine was used in the season of 1936-37 on 25,000 persons in CCC camps but the number was too small for forming a final opinion. In so far as one can surmise, the method gave some promise else they would not have gone into it so extensively in 1937-38, nor would they have announced such opinions as: one dose will suffice, the price will be $1.00 for enough vaccine for one vaccination, and one gram of vaccine is sufficient to vaccinate 1,000 persons. The organisms vaccinated against were pneumococcus, Types 1 and II.

The basis of some of the difficulties encountered in conducting vaccination is as follows: The present teaching is that the anatomical classifications of pneumonia should be abandoned as being both worthless and misleading. We know that the clinical course of pneumonia has changed in the last thirty years and may have changed several more times in medical history.

The physician who undertakes to diagnose present-day pneumonia by the results of physical examination of the lungs using for his yard stick the pneumonias prevalent before 1918 finds himself at sea. If we have found the anatomical classification misleading and charting by clinical course and physical examination are too variable, what is left? The answer is bacteriology. But is that uniform? It has not so proven. We have pneumonias due to pneumonocci of some 32 strains, streptococci, stapnylococci, Friedlanders bacillus, the influenza bacillus and possibly one or more colds virus and also an influenza virus.

The trend of opinion is that the polysaccharid material in the capsule of the pneumococcus is responsible for the type specificity of the pneumococcus as well as being closely related to its other qualities. There is a variety of evidence as to the possibilities of effecting change in the capsule. Physical, chemical, and biological work done by Avery and Dubos[9] and by Sickler and Shaw gives one apparently practical method of changing this capsule as well.

White[6] commenting on the vaccinal and curative possibilities of the findings of Avery and Dubos and Sickler and Shaw, says, "The discovery of saprophytic bacteria and enzymes capable of breaking down the complex saccharid is of more than academic importance. This enzyme has been shown to save mice, rabbits and monkeys from all save massive infections." One of the best chapters in White's book is that on dissociation. This chapter says: "Virulent pneumococci of all known serologic types upon encountering unfavorable physical, nutritional or other biochemical conditions undergo marked changes in virulence, in ability to elaborate capsules, in colony fermentation and in immunologic characters."

Lister and Ordman[3] experienced a change from the pneumococcus to the streptococcus as the predominant cause of pneumonia over a wide stretch of country and over a considerable time. It became necessary to change their vaccine and to consider it subject to continued change. The vaccine content of the material used in the Transvaal differs considerably from that used in Northern Rhodesia. This much appears to be accepted now. The pneumonias are due to some pathogenic organism which, while enroute to the blood stream from the upper air tract, is caught and held for a time in the lung tissue and there held causes the disease, pneumonia. The infecting organism may be any one of several but just now in America it is pneumococcus Types I and II in 60% of cases.

But such variation in the bacteriology of pneumonia does not destroy the possibility of an effective vaccine against the disease. It does make it necessary to change the content of the vaccine at times and it does add to the confusion of reports.

The following is my estimate of the state of medical opinion on the use of vaccines to prevent pneumonia. Unanimously, students of the subject are of the opinion that the value of vaccines in producing the phenomena of immunity has been proved. The physiologic evidence is scientific, complete and satisfying.

The same group of students accept the proof of produced immunity in experimental animals although they have some reservations. When it comes to human beings most epidemiologists do not accept the efficacy of vaccination. Those who vote against it admit the physiologic evidence, and experimental evidence in favor of it but they think it has not proved its worth in practice. They have various reasons for regarding it as of little or no practical value. The great need therefore appears to be for carefully checked clinical experience.

It is just this need that the report of Lister, Ordman, and Peall undertakes to supply. The mass study by the Army School and Felton should prove of the greatest value in meeting this particular need when that report becomes available. However, they will report on a vaccine made from cultures of pneumococci Types I and II. Even though that vaccine should prove satisfactory for the time, South African experience would indicate that it would need to be changed in time.

Surely we may expect that in time vaccines will become more efficacious just as has happened with similar products used for diphtheria, typhoid, and smallpox.

In addition we have a right to expect something from the lines of research instituted Avery and Dubos, Sickler, Shaw and Joffrich.

We close with the following recommendations:

1. That the public be taught the environmental factors and factors relating to personal hygiene that are important contributing factors to pneumonia.
2. That in the State of Mississippi the people be put on special guard against pneumonia in December to April, inclusive.
3. That they be warned to avoid the high pneumonia areas in the period of pneumonia peak.
4. That the common cold be accepted as a pneumonia forerunner and be treated accordingly.
5. That vaccination be done against pneumonia during the month of December trusting to produce an immunity which will last until April.
6. That doctors pay especial attention to the especially endangered groups such as children three years of age and under, children with whooping cough and measles.
7. That doctors avoid operations in which inhalation anesthesia is used during the pneumonia peak.
8. That the health authorities require the prompt reporting of pneumonia as is done with diphtheria.
9. That the term influenza be not used except in influenza epidemic years.
10. That the endemic pneumonia statistics of Mississippi be put into two groups and so shielded, the first group being composed of the counties south of an east and west line through the south side of Hinds County, the second, the counties lying north of that line.
11. That comparative prevalence of pneumonia be determined for different parts of the U. S. by grouping the states into three classes: (a) South of the 35th parallel of latitude; (b) area between 35th and 40th parallels, and (c) north of 40th parallel.

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Obstetrics In General Practice*

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THE SUBJECT I have chosen to present to this society this afternoon, in my opinion, has caused the general practitioner more concern than any other branch of his work.

We are called on to see cases while in real labor that we have never had an opportunity to investigate. We know nothing of their general physical condition, of existing pelvic deformities, and we have never questioned them as to past pregnancies if multipara. It is not uncommon to see these cases with eclamptic convulsions, ante or postpartum hemorrhage, uterine inertia due to prolonged labor, or frequent childbirths.

Another complication so frequently met in these cases is abnormal presentation which is not found until examination is made, and usually the labor has advanced so far that it is impossible to correct this except by surgical procedure, that is, application of forceps, version or Caesarean section.

Often the doctor is not called until the presenting parts have engaged into the pelvic arch. When such complications stare us in the face, we are alone, for it is then impossible to get consultation or have the advantages of a hospital. We are forced to decide for ourselves which is the best method to pursue.

This is where the general practitioner must use good common sense and judgment, bearing in mind at all times the welfare of the mother first. At the same time he *must* consider his own professional career. He must be just as conservative in these cases as possible. He must get the quickest and most satisfactory results.

We are often astonished with the results we obtain when we stop to think of the surroundings in which we have been working. The home is probably a shack out on a plantation, with no conveniences, not even utensils in which to sterilize instruments or a wash pan in which to wash our hands.

Working under these unfavorable conditions and handicaps, as I look back over my own experience in the 27 years I have practiced medicine, I recall that out of my very numerous obstetrical cases (an accurate account of which I am sorry to say I have not kept) I have lost only four. All of these deaths were cases where there had been no prenatal care under a doctor's directions.

From this fact, and also from talking to my doctor friends in my community, I have come to the conclusion that our results as to maternal and fatal mortality and morbidity rates are not alarmingly high, although I do feel that a great work in the future can be accomplished by proper methods of diagnosis and treatment of these expectant mothers from the beginning of pregnancy until dismissal after confinement.

In recent years, excellent work has been done toward improving obstetrical care, especially pre-natal care.

In my opinion success in these cases depends almost entirely upon regular routine prenatal care given these patients.

I am quite sure that a number of physicians in this audience are wondering how it is possible to give these patients the proper treatment when they have not had an opportunity to see them until called in, during actual labor. This, I admit, is quite a problem, but it can be solved to a certain extent as I shall attempt to outline. In the meantime, the only rational thing for the doctor to do is to meet the situation as it actually exists and deliver the patient with the very best methods available.

Right at this point I want to report a case that I was called to see in March of this year, just to illustrate what the general practitioner runs into. Patient colored, age 22, about 8 months pregnant, second baby, examined one time early in pregnancy by State Board of Health but did not report for further examinations. When arrived, I found the patient in complete coma and having hard convulsions.

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*Read before the Delta Medical Society, Rosedale, April 13, 1938.

Not knowing the status of the case, I did not go prepared to handle a case of this kind.

I gave her two, three-grain capsules of sodium amytal per rectum at this time, returned to my office, and prepared to do something for the woman. I saw her again about 5 p. m. High enema given, one two-grain capsule sodium amytal per rectum, ¼ grain morphine sulphate given hypodermically. Duodenal tube passed through nose into stomach, stomach emptied and washed out. I then gave her two ounces of a saturated solution magnesium sulphate the same way. No opiates or amytal were given. About 10 p. m., the patient became somewhat restless but had no convulsions. Her bowels began to act freely. She seemed to be having pains. I placed my hand over the uterus and felt uterine contractions. I then inspected the peritoneum and was agreeably surprised to see the peritoneum bulging and the head presenting. She was delivered immediately. I made her comfortable in bed and gave instructions as to her care. She had no more convulsions, was talking next morning, and made a speedy recovery. The baby was born alive, but lived only two hours.

The physicians themselves can do a great work in preventing complications by education. To educate patients before pregnancy takes place just means letting them know how very important it is to keep themselves in the best physical condition so their confinement will be much easier and fewer complications will arise. We must impress upon them that their ability to bring into the world normal, healthy babies depends upon their keeping themselves in perfect condition all through pregnancy. In order to do this, it will be necessary for them to report regularly for routine examinations, so that any physical defects may be found and corrected before labor begins.

Most of these patients can report to the physician's office, and these routine examinations will consume very little of his time. By routine examinations I mean to get full and complete history of the case on first examinations. If primipara, gain her confidence and give her necessary instructions, so she will not worry or dread the time when actual labor begins.

If multipara, I think an important factor which will be of great value to the physician is the history of her past childbirths. Find out former complications, if any, and the duration of each former labor.

Let me outline briefly my method of handling prenatal cases. I am very glad to say that I handle very few cases that have not employed me early in their pregnancy.

After a thorough and complete history has been obtained, blood pressure, weight and urinalysis completed, so that future examinations can be readily checked to ascertain what changes have been made as her pregnancy progresses, my patient is then prepared and placed on the table for a thorough examination of the heart, chest, abdomen and breast. Wassermann is taken; teeth, tonsils, and sinuses are also inspected. I consider this very important so as to eliminate any foci of infection in early pregnancy that might cause complications later, and no doubt has been responsible for a great many cases of toxic vomiting.

I complete my examination by getting pelvic measurements and by making a thorough examination of female organs for pathology and displacements. One can also obtain some valuable information from this examination as to whether you are dealing with a normal or a deformed pelvis.

I am now in a position to talk with my patient intelligently about her case and give her the necessary instructions to carry out until she returns for examination.

Before the expected date of confinement, I give her a list of things to be sterilized. Each article is wrapped separately, placed in a high pressure sterilizer and either sent to her home or carried by me when labor begins.

In conclusion I want to leave this one thought with the doctors who practice in the smaller towns and rural sections, and that is, we must improve our obstetrical work by educating the patients as to the importance of prenatal care during their entire pregnancy. Let's take more interest in our pregnant women and improve our methods; by doing so, our maternal and foetal mortality and morbidity rate will be greatly reduced.

THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

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OFFICIAL ORGAN OF
Mississippi State Medical Association
Mid-South Post-Graduate Medical Assembly

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Published monthly at Booneville, Mississippi

Annuol subscription $1.00

Entered as second-class matter, January 19, 1926, at the post-office at Booneville, Miss., under the Act of March 3, 1870.

The September meeting of the Northeast Mississippi 13-County Medical Society at Amory was perhaps the best all-round meeting the society has ever held. "X-ray therapeutics," by Dr. J. Rice Williams, was an instructive and timely paper. This subject needs to be discussed more often before the general practitioner. Dr. Williams is one of Mississippi's best authorities on x-ray therapy. The paper of Dr. W. A. Evans', on "Preventive Pneumonia," will no doubt help to make medical history in our country. The society deeply appreciates this paper, which represents much time over a period of many months and the expenditure of no nominal sum. We are proud of Dr. Evans, this society and this state.

It was a great compliment to this society for Dr. George W. Crile to come from Cleveland to discuss a subject of such great interest, "An Analysis of the Indications and End Results of Surgical Treatment of 425 Cases of Essential Hypertension." You will note a brief review of his book on this subject elsewhere in this issue. Dr. Crile has an international reputation, he is versatile in cultural learning, profound in medical knowledge, and seasoned in surgical wisdom—behind all of which are multiplied years of experience. And with all,he is yet an enthusiastic student and an active teacher. He believes in knowing the patient in all of his relations to life as well as the attacking organism. No other man in our nation perhaps has exemplified such wise consideration for the patient and such tender respect for human tissue. He is a great teacher and a great citizen. This society deeply appreciates his visit to us.

The Monroe Medical Society gave us a fine banquet at the Methodist Church and the reception was most cordial. We are deeply grateful to Dr. George, the pastor, and the good women of his church. We must not forget the guiding spirit that planned for this great meeting for a number of years, Dr. G. S. Bryan, one of the ablest students we have in this state on medical practice and medical economics.

The woman's auxiliary held a successful meeting and were honored with an address by Dr. W. A. Evans. The district organization was honored by a visit from Mrs. John B. Howell of Canton, President of the State Auxiliary and one of its most versatile members, broadly educated and cultured in heart and mind.

The Society was honored with the presence of many visitors from over the state and a number out of the state. President Joe Green was with us and also President-elect Percy Wall. They are doing fine work for the state association. Dr. Joe is proving himself one of the ablest leaders.

Dr. R. J. Brown presided as president and our most efficient secretary, Dr. A. J. Stacy, demonstrated his usual fine secretarial ability.

Our medical problems are becoming more complex as the years come and go. It was a wise move for the officers of the American Medical Association to call the house of delegates together. The selection of a committee to meet with President Roosevelt and his committee was a sensible thing to do and we are very proud of the part played in this by

Drs. Garrison and Underwood. The ostrich does not increase his safety by hiding his head in the sand. The medical profession has nothing to gain when it says we are in no danger of state medicine and that the people are receiving adequate medical care. We have problems before us that challenge the honest thought and the medical integrity of every member of the profession. The rank and file of the medical professionaires are in need of adequate pay and shorter hours quite as much as the masses are of adequate medical care applied under conditions suitable for their utilization. The committees from the Medical Association and from the President should know conditions as they are before they act. The medical profession has a record of service that should command the kindest consideration. The intangible forces are the powerful factors in human affairs. We cannot see the wind, the heat, the cold. Money can pay for medicine and for a call at so much per mile. but it cannot pay for human interest, for the love of medical knowledge, and for personal freedom in its application. Take from the people the right to choose their doctor, their hospital, and their nurse, and you do them wrong and at the same time you take the heart and the soul out of the practice of medicine; lower its germinating power for producing new thoughts and humane discoveries. On the problems before us every practitioner, every member of the profession, should think honestly and should feel free to place his ideas into the hopper of true evaluation for the good of a noble profession and in the interest of the people it is so sincerely striving to serve.

The Southern Medical Association will meet in Oklahoma City on November 15. It will be good for us, for the association and, most important of all, our clientele, for us to attend. It will be good from the first hour until the last minute. The "public night" will be worth the trip. The meeting of the presidents, presidents-elect, secretaries, and editors, instituted by our own Harvey F. Garrison, will be most interesting and valuable. The scientific program is always good. The exhibits, both scientific and commercial, will be instructive. The said feature will reinforce our knowledge and activate fraternal poise.

There are many sections in the South, especially in the small town and rural community, that can no more pay for the medical care they need than they can for a national concrete highway by their door. National, state, municipal, church and philanthropy will all have to join hands to supply the needs.

The average death rate per hundred thousand for pneumonia in the United States is 135, in Mississippi 83. in South Mississippi less than this. So one plan might be, "Go to Mississippi and avoid pneumonia."

One tenth of the deaths of this country are caused by pneumonia according to Dr. W. A. Evans. Vaccination against the disease is the big challenge to the profession at this time.

There is no question but that many people in this country are not receiving the medical care they need; but neither are they receiving the bread and meat and milk, the clothing and the housing they need.

When groups of people band together to secure a doctor at the lowest bid, they are just beginning to pay very dear for medical care.

Probably every reader of this journal is familiar with the circumstances leading up to the call for the recent meeting of the house of delegates of the American Medical Association in Chicago. This was the third such meeting in the history of the association. It remains to be seen whether any good will come of this meeting. But it seemed that something had to be done or attempted, since state medicine was knocking at our doors. This writer has said over and over again that this will be nothing short of tragedy if it comes, and yet he sees clearly that a situation or condition exists that might seem to offer reason for this step. I am fully convinced that a very large per cent of our people are not getting adequate and efficient medical care. Many doctors do not believe or admit that this is true, but surveys that have been honestly made proves, definitely, that it is. Denying facts or failing to recognize them will never evade consequences. We are confronted with a condition and not a theory. Something must and will be done—but what? Ay, there is the rub. Some doctors argue that it is not a governmental matter. But this writer contends that the life, health and happiness of the citizenry is, pre-eminently, a governmental affair. But he is equally strong in his conviction that the indications are that the governmental approach to the matter is entirely wrong. And it is not surprising that this is true, since governments are conducted by laymen and, worse still, by politicians. The bone of contention that led to the afore mentioned meeting of the house of delegates seems to be, and was, the matter of group insurance in Washington, D. C. Now let us consider the facts in this case. They are as follows: A corporation was created that proposed, for a stipulated monthly premium payment, to furnish all kinds of medical and hospital care to certain government employees, and this proposal was backed by the government to the extent that it (the government) would contribute a definite sum per annum to help provide this service. Of course, it follows that this service should be rendered by salaried physicians chosen and paid by this corporation and supervised and directed by it. There can be no question that this procedure would be in direct violation of all ethical precedents. It is equally clear and certain that it would involve a lowering of medical service standards. One has only to apply common sense and reason to see and understand this. Again one has only to look into conditions as they prevail in all countries where this, or a similar, plan has been adopted, to see that this is true. The plan is wrong in principle, hence it cannot be rightly applied. But let us pass from the consideration of the ethical aspects of the matter and view it from its moral and humane angles. Do no forget that the government proposes to spend a definite (and liberal) amount of tax-payers money to carry this plan through. Then let us see who is to be benefited. Ostensibly it is for the benefit of certain government employees. Let us consider them: They are men and women who are regularly employed—who hold very desirable jobs or positions.These jobs are under civil service regulations and hence are more or less permanent. These people have never felt (and never will) the pinch of depression. Of all people, why should they be made the special wards of the government—why should the government be more concerned for them than for others in that it will contribute to the cost of medical, surgical and hospital care for them? It would seem to me that these people, being so fortunately situated, might be able to care for themselves. On the other hand no provision has been made or proposed for the millions of indigent—those who cannot possibly provide care for themselves. It is for these that my sympathy and interest goes out. Doctors have always been willing (and still are) to serve the sick and needy without pay. But the number of these indigent is so much greater than formerly that the load simply cannot be borne longer by the doctors. We must look deep for the cause and when this is found the remedy must be applied. Placebos will no longer satisfy. As set forth in a previous issue, when there were but few millionaires, there were but few paupers. Money does not grow on trees, neither has it any intrinsic value. It is only the result of labor. Labor is the only thing known that has intrinsic value. Money or any other commodity, is, simply, evidence that some man has labored. When a man accumulates vast wealth it is certain that others have labored and he has garnered the proceeds of their labor. You cannot make millionaries without making paupers. And since paupers have no money to buy commercial goods, those who have wealth will not manufacture. Therefore unemployment is a natural result and with unemployment indigency is bound to follow. Hence, it is clear to me that the only remedy for the present crisis is more work and better pay, even though profits should be wiped out entirely. If those who have or control the wealth of the nation refuse to see and cure the malady, then it becomes the duty of the government to compel them to do so. To me it seems clear that there are only two ways that this can be done, namely, tax the over rich until all the indigent are cared for in all ways or confiscate this hoarded and ill-gotten wealth and let a centralized government take over all business and run it in the interests of all the people. This is democracy that will work. Unfortunately bureaucracy will be fostered to an undesirable extent. Perhaps expediency demands that something like this be done. But mark this prophecy—if neither of these plans should be adopted, then **revolution** such as the one seen in France and the one that was staged in Russia is sure to occur here in the United States. Human nature never changes—the hungry must and will eat—the worm will turn and sting the foot that crushes it. This is a changed and rapidly changing world—things now happen speedily. "Beware the ides of March."

G. S. B.

RESOLUTIONS
Presented to the House of Delegates of the AMERICAN MEDICAL ASSOCIATION

DR. HARVEY F. GARRISON, Mississippi
DR. FELIX J. UNDERWOOD, Mississippi

In making a report on the meeting of the House of Delegates to the American Medical Association, Dr. Harvey Garrison writes:

"I am herewith inclosing a copy of the resolutions presented by the two delegates, Doctor Felix J. Underwood and myself, for the consideration of the House of Delegates of the American Medical Association. This resolution was the only one presented to the House of Delegates which had the distinction of receiving the unanimous approval of the whole committee. When the report of the General Committee was brought in, it was found that they had incorporated the principle features of our Resolution.

"There was a Committee of seven appointed which included Drs. Irvin Abell, President of the American Medical Association, as Chairman; Walter F. Donaldson, Pennsylvania; Walter E. Vest, West Virginia; H. A. Luce, Michigan; Fred W. Rankin, Section on Surgery; Frederick E. Sondern, New York, and E. H. Carey of Texas. Drs. Rock Sleyster, President-Elect and Olin West, Secretary, were declared by the Speaker, to be members of this Committee, ex-officio.

We feel that considerable progress was made by this House of Delegates, looking toward a satisfactory solution of medical aid proposals by the government.

Dr. Irvin Abell is to bring the principle address to the Conference of Presidents, Presidents-Elect, Secretaries and Editors in the territory of the Southern Medical Association, and at the meeting of same in Oklahoma City. It is therefore anticipated that this conference will receive the very first report to be made by the President of the American Medical Association, of the activities of this special committee in Washington, relative to plans for medical aid for the indigent and the lower income group. We are looking forward with anticipation to hearing Dr. Abell's first report to our Conference in Oklahoma City."

The resolution follows:

WHEREAS, in August 1935, the President of the United States of America did name a committee, known as "The Inter-departmental Committee to Co-ordinate Health and Welfare Activities," and this committee did on June 14, 1938, make known at least a portion of its findings to the House of Delegates of the American Medical Association in an address by its chairman, Miss Josephine Roche, presented by the Assistant Surgeon General of the United States Public Health Service, Dr. Warren F. Draper, and extended an invitation to the House of Delegates, or its representatives, which was accepted, to attend a meeting of the National Health Conference in Washington, D. C., July 18-20, 1938; and

WHEREAS, the findings of this committee were not entirely in accord with nor acceptable to the representatives of the House of Delegates of the American Medical Association; and

WHEREAS, the House of Delegates of the American Medical Association is not unmindful that a large percentage of our population who, because of economic conditions, are not able to pay for adequate medical care and perhaps because of this financial inability are not receiving the attention they should have; and

WHEREAS, it is the opinion of the House of Delegates that Organized Medicine is anxious to do all within its power to bring about a system that will offer better and more adequate medical care to the indigent and to those of the low bracket income in our country; therefore

BE IT RESOLVED by the House of Delegates of the American Medical Association, in called session in Chicago, this the sixteenth day of September, 1938, that this body is in sympathy with the President of the United States in any laudable effort to improve the physical condition of such a large group of our people who are not now receiving adequate medical care; and

BE IT FURTHER RESOLVED, that the President of the United States of America is hereby respectfully requested to name a committee of five, or such a number as he may deem proper, to act with a like committee from the House of Delegates of the American Medical Association to study the data and plans accumulated by "The Inter-departmental Committee to Co-ordinate Health and Welfare Activities," and those available from the study of the American Medical Association, with the idea of reconciling the differences now existing as to the proper procedure to follow in order to make proper and sufficient distribution of health facilities to the "consumers of medical care" who are unable to meet such expense; and

BE IT FURTHER RESOLVED, that the two committees have reached a conclusion as to the desired procedure that should be followed, and the combined committees shall submit their recommendations to the President of the United States of America, the Board of Trustees, and the Speaker of the House of Delegates of the American Medical Association, the latter of whom, by order of the Board of Trustees, shall then call the House of Delegates into special session to consider such report and its final disposition.

NEWS AND COMMENTS

Dr. H. W. Priddy announces the dissolving of partnership with the Wallace Sanitarium and resuming of private practice in Physicians and Surgeons Building, Memphis, Tenn. Dr. Priddy is a native of Mississippi and has many friends in this state.

The Medical School of The Tulane University of Louisiana continues to offer helpful courses to the doctors of the Southern states. On October 24 to 29, inclusive, the faculty of this great school will give this intensive course covering the entire field of medicine and surgery.

Dr. P. L. Fite of Columbus recently sold his hospital to Dr. J. T. Doster of Gadsen, Ala. Dr. Doster seems to be worthy and well qualified in every respect to take over this splendid hospital. He is a graduate of the University of Alabama and Jefferson College. He received his certificate from the American College of Surgeons in 1932 and for a number of years has been doing general surgery at Gadsen, Alabama. The medical fraternity of Mississippi is glad to welcome Dr. Doster.

Dr. Rowland announces that during the past month he has received for the library of the Ole Miss Medical School, one of the finest private medical and surgical collections in the state, that of the late Dr. J. A. K. Birchett, of Vicksburg. It consists of more than five hundred volumes of medicine and surgery, and some four hundred copies of valuable journals, and was donated by Dr. Birchett's son, Dr. J. A. K. Birchett, Jr., of Vicksburg, an alumnus of the school, class of 1917.

He is also pleased to announce that he has received from Dr. John D. MacKellar, of 1377 East 63rd St., Chicago, a gift of more than two hundred fine volumes of medical and surgical books.

Three thousand volumes of valuable works have been added to the library since June first. Dr. Rowland is doing a great work for the medical school at Ole Miss. A great and noble character is he. He is a living example of our philosophy, "If a man keeps mentally and physically fit he should be worth more to human society every day he lives, though he lives to be a full hundred."

We deeply regret the passing of Mrs. Bessie Crosby Frizzell of Brookhaven, the wife of Mr. W. H. Frizell. Mrs. Frizell was a woman of culture and refinement and accomplishment. She was active in church and in community affairs for her town. She was honored with the presidency of the Woman's Auxiliary along with many other honors in the society. Every honor was filled with distinction. Dr. Frizell has served as president of the Mississippi State Medical Association and is now a member of the council. For many years he has been a leader in the state association. To him and the rest of the family we offer our deepest sympathy.

Dr. Thomas J. Brown of Grenada, who died at the local hospital in Grenada on October 10, 1938, had practiced medicine in Grenada County for nearly a half century. He was a native of Mississippi, Yalobusha County. He has been a corner stone in organized medicine in Mississippi. He served his town and county many years as health officer. At the time of his death he was county health officer and was a member of the council of the Mississippi State Medical Association which honor he had held for many years. Dr. Brown loved the practice of medicine, was true and loyal to the profession in every way. He was a fine citizen always ready to do his full duty to church and state. He was deeply devoted to his family and they to him. He had a heart that was kind and tender and generous. He was one of the most delightful friends any man ever had. This journal feels deeply his loss and it offers to Mrs. Brown and the three daughters its sincerest sympathy.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

Compound Fractures*

T. E. ROSS, M.D.
Hattiesburg, Miss.

Fracture therapy demands individuality, and compound fractures tax the ingenuity of the surgeon to the limit. No dogmatic rules can be laid down for treatment of all types.

A compound fracture is one having a communication between the bone lesion and the outer air. There may be little or great laceration of the skin and soft tissues. These conditions may be produced by direct protrusion of the bone from within or by penetration of some object from without. This may be small, like a bullet, or a tearing and crushing of tissues between the bone and an external force. Diagnosis as to the compound nature of the lesion is not always easy; but, in case of doubt, it is well to assume that the fracture is compound. Occasionally, gentle pressure on the tissues may cause minute droplets of fat, originating from the bone marrow, to ooze out of the small wound and this aids in a conclusion.

Treatment at the scene of the accident should consist in the simplest measures possible. No attempt should be made at reduction other than to straighten the limb. It should be immobilized by whatever means are at hand and if bleeding is severe, a tourniquet applied. The patient should be transported to the hospital at once.

On admission to the hospital, these injuries must always be looked upon as emergencies and treatment begun immediately. Every severe fracture case is actually or potentially in shock. Morphine in sufficient dosage should be administered. Control of hemorrhage and shock measures are instituted, as the patient's condition might indicate. If there is a cold, clammy skin, rapid pulse and abnormally low blood pressure, fluids should be administered intravenously. Five per cent glucose in normal saline solution is commonly used. Isotonic solutions by hypodermoclysis cannot be depended upon as the absorption may be too slow. Blood transfusions may be necessary. A thorough examination should be made at this time to determine other possible injuries. To neglect this, may result in future personal embarrassment as well as being detrimental to the patient.

The general condition warranting it, attention is then directed to the type and extent of the injury as far as simple inspection will reveal. In fractures of bones of the extremities, the first consideration is to the viability of the distal portion of the limb. Obviously, when the soft parts are so damaged, and the limb mangled beyond hope of repair, or where the distal circulation is completely gone, amputation is indicated. However, these indications should be absolute and if there is any doubt an attempt should be made to save the member. Amputation can be performed later if necessary.

Unless the wound is wide open, allowing a free inspection of the bone fragments, a sterile covering is applied and roentgenograms are obtained. Really, x-ray examination should be routine in every case because even with the wide opening allowing inspection and free palpation, it aids in locating fragments of bone and foreign bodies that may have been driven some distance through the tissues. Recently, when x-ray was omitted and the wound had failed to heal after six weeks, it was very disconcerting to locate a large piece of gravel and have to remove it at that late day.

There being no contraindication, a general anesthetic is administered.

The procedure then resolves itself into (1) treatment of the skin; (2) treatment of the wound; and (3) treatment of the fracture. The skin is carefully cleansed with soap and warm water, always washing away from the wound, and a sufficient surface is shaved, care being taken not to contaminate further the open area. Alcohol, ether and tincture of iodine are applied extending to the skin margins. The wound is then irrigated with a copious quantity of normal saline solution to remove dirt and other gross contamination. Next, a most important step, a careful debridement is undertaken. The skin edges are trimmed, removing all devitalized areas. The skin opening should be enlarged if necessary. With a fresh knife, all contaminated or apparently devitalized tissue, subcutaneous, fascia, muscle and bone are cut away. Great care should be exercised to prevent damage to any nerves or blood vessels crossing the field. Soiled or discolored ends of bones should be chipped away by means of chisel or rongeur. All free or detached pieces of bone are removed. Those fragments with periosteum attached should be retained. And then again, a thorough irrigation with warm, normal saline solution is done. This, to my mind, is the most essential step of the operation. In an average case one to two gallons of the solution are generally employed and sometimes more. The ordinary irrigator and stand are used with the vessel elevated to its highest position. The stream is played into the wound held open by fingers or retractors and all pockets are sought out. A metal catheter may be connected to the glass nozzle to insert between and behind bone fragments where the glass tip would be in danger of breaking. An ordinary rubber catheter may likewise be attached and this will go around corners and into crevices that would otherwise be inaccessible. The tissues take on a waterlogged, whitish appearance, but I am as loathe to quit irrigating as some dentists are to quit drilling in a tooth. At the conclusion of this step the bone fragments are molded into position and transversely cut muscles are sutured with plain catgut. If there should be a condition necessitating it, primary suturing of severed tendons or nerves has everything to gain. As perfect hemostasis as possible should be secured. The skin is then closed very loosely with widely interrupted sutures of silkworm gut. The bone should be covered and if the tension is great, longitudinal incisions one or two inches away from the wound are made. The question of drainage has presented itself just prior to this last step. If the case has been handled within six or eight hours from the time of the accident and treatment outlined above has been carried out, no drains are used ordinarily. In cases seen after seven or eight hours, or where there has been severe damage to the soft parts or sometimes loss of tissue making it impossible to close, the wound is left open and packed loosely with iodoform gauze. During these latter steps maintenance of reduction should be ever in mind.

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*Read before the Section on Surgery at the Seventy-first Annual session of the Mississippi State Medical Association, Jackson, April 20, 1938.

In cases compounded by protrusion of a small end of a bone fragment from within and in high powered small bullet wounds there is the temptation simply to disinfect the skin and small opening and leave them alone. However, two severe infections and resultant long drawn out cases of osteomyelitis have suggested that it might be wiser to go ahead and enlarge the wound and follow the usual routine.

From this point on, the case is handled as a simple fracture. Plaster-of-paris casts or splints may be applied in most instances, with a window cut out to afford free access to the wound for inspection and dressing. In fractures below the knee the Delbet splint has proved advantageous when there has been considerable laceration and abrasions of the skin. Skeletal traction may, in quite a few instances, be necessary to maintain reduction. This is usually secured by means of a Kirschner wire and suspension in a Thomas splint. Internal fixation is never advisable but the use of wire has been resorted to in several cases where other injuries have precluded the application of indicated skeletal traction. Absolute immobilization is most important because at best compound fractures are notoriously slow in uniting.

Very close observation and attention is required in the after care. Fifteen hundred units of antitetanic serum is administered subcutaneously as soon as the handling of the fracture has been completed. The combined tetanus-gas gangrene serum is occasionally used when there has been excessive trauma and you are not quite sure of your debridement, etc.

Evidence of a simple infection requires the removal of all sutures and leaving the wound wide open. The dreaded gas bacillus infection usually shows itself in one to three days. There may be increased pain, temperature and a pulse more rapid than would be expected from the patient's general condition. Discoloration and marked swelling in the region of the wound and crepitation in the soft tissues makes one very suspicious. And if in addition, a stained smear from the wound shows the presence of large numbers of short.

thick bacilli, the diagnosis is warranted. If a case has ever been smelled before, your nose will practically make the diagnosis. Prompt surgical treatment is imperative. Amputation is frequently necessary. Anti-gas gangrene serum in large doses should be combined with the surgical treatment. Bohlman, about a year ago, reported the successful treatment of three cases with sulfanilamide. A significant fact was that all three cases had received prophylactic doses of ten thousand units of combined gas gangrene antitoxin. McMaster reported forty-nine cases of gas gangerene in compound fractures and of these, seventeen had received anti-gas gangrene serum at the time of initial treatment. Apparently the prophylactic value can be questioned.

Simple infections may clear up or may proceed to the stage of a chronic osteomyelitis in which event appropriate measures are continued.

It was difficult to appease my conscience when I first quit flooding these wounds with tincture of iodine. Then resort was had to various other antiseptics and germicides and finally, several years ago, to the procedure just outlined. The results have proved its superiority. However, any method of handling compound fractures still leaves much to be desired. Lord Lister, in 1865, first employed carbolic acid, in the successful treatment of a compound fracture and thereby made a great step toward immortal fame. Perhaps this same medium will be a stepping stone for someone in the future.

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DICUSSION:

DR. V. B. PHILPOT (Houston): I want to congratulate Dr. Ross on his very excellent paper. I got a copy of it, read it over two or three times trying to find some place where I could add to or take from it, but he has already got in it more than I know, and there is not much I can add except to compliment it.

I would like, however, to emphasize two or three points in his paper; first, the necessity of treating the shock previous to any surgical procedure and especially when a badly mangled limb exists. It is better to wait several hours, if necessary. I can recall a case or two that have come under our observation in which deaths have occurred in compound fractures where the soft tissues were badly lacerated and the body in general badly contused. In these had we waited longer in our efforts to do the necessary operation and adjust the fractures, and treated the existing shock, as outlined by the essayist, we might have saved these lives. The result in these cases are so impressive that I want to call especial attention to the necessity of treating shock before doing the necessary operative procedure.

Dr. Ross mentioned the use of antiseptics. Not many years ago we used many forms of antiseptics in the wounds themselves. This was taught some years ago by Dr. Moorhead, of New York, whose work I have had occasion to observe and whom I consider one of the greatest traumatic surgeons of this country. I am sure this is not his teaching at this time. With the exception of the use of skin antiseptics, we now depend mostly on the debridement of wounds in compound fractures or any other wounds and prolonged irrigation of these wounds with a normal saline solution. In other words, we now depend more on the physical cleanliness and the removal of all devitalized tissue in the treatment and prevention of wound infection than upon the use of antiseptics in the wound.

In our work we prefer to avoid the use of internal fixation material in compound fractures when possible. After a thorough debridement and cleansing of affected parts we prefer to adjust the fragments in such a way that a lock will take place. Frequently we are able to fix a sharpened portion of one end into the medullary canal of the other end. Followed by the application of a plaster-of-paris cast or proper splint and, when continuous extension is necessary, the use of skeleton traction by means of a Kirschner's wire is a fairly simple procedure and very effective.

By these and other simple methods we can, to a very large extent, avoid the use of plates and other foreign material in compound fractures and when we do we may eliminate a lot of trouble.

DR. E. C. PARKER (Gulfport): Dr. Ross is fortunate. He is situated where he has a great deal of traumatic work. His hospital that he works in is right on the highway and people pass and get hurt anywhere within

30 or 40 miles of him, and they know how to rush back to his hospital, so he does more of that work than the average doctor.

I agree with him thoroughly on the soap and water. I think we do damage with too many strong antiseptics. I do not know of a thing that is better than soap and water and plenty of it.

In setting the fractures, I do not, as a rule, use a general anesthetic. I have found I can take a good long needle, shoot a little novocaine under the skin and go on down to where the fracture is. If you get blood in your syringe inject 2 c.c. of novocaine solution, give it about 5 minutes, and you have all the results from a general anesthetic without any of the nausea following after.

He spoke of the debridement—that is about the main thing that the American surgeon got out of the World War; we did get that. We were not doing that before the war, but following the World War, we learned thoroughly to clean those old mangled wounds out. If a piece of tissue is so devitalized that it is going to die why let it stay there and slough off? Get it out yourself and you will save a great deal of infection.

Again I want to thank Dr. Ross for his paper.

DR. FRANK HAGAMAN (Jackson): Dr. Ross has given us an excellent paper, and I think he has shown the proper attitude toward the subject of compound fractures in not attempting to generalize too much, or to postulate a method of treatment for each type of compound fracture. As he said, each one is an individual problem and with the exception of the institution of thorough cleansing of the wound—debridement—and the avoidance of putting plates or screws on the bone, each case has to be treated as an individual one.

There are one or two points with regard to the treatment of compound fractures that I would like to comment on. In those fractures that are produced by internal force, i. e. the bone fragment rupturing the soft parts and protruding through the skin, we think that possibly if the wound is not large, it is better to do a debridement of the skin edge and suture it, reduce the fracture and not attempt to enlarge the wound and do a complete debridement, although there is great divergence of opinion about that, and a number of authorities feel that it is always necessary to do an extensive debridement whenever the skin is punctured. In the more frequent type of compound fracture, where the force is an external one, then of course this process of debridement should be carried out in full force.

Dr. Ross mentioned the necessity of early treatment. I believe that any compound fracture of any bone is as much an emergency as would be a ruptured blood vessel, unless there is shock that would make any operative procedure unwise. In the cases we have been able to see before a period of six or eight hours had elapsed, I have had a fairly large percentage of primary union of the bone. In the cases where more than ten hours had elapsed, practically never have I been able to get primary union. With a few exceptions, in the cases that we get early, we do the debridement, close the wound as Dr. Ross has suggested, reduce the fracture and immobilize it, preferably with plaster. When the accident has occurred more than ten hours prior to admission to the hospital, I believe the best method of treatment is to carry out thorough debridement, and instead of using iodoform, it has been our practice to use vaseline gauze.

With reference to sulfanilamide in the treatment of gas gangrene, Dr. Ross mentioned that there had been three cases treated successfully with sulfanilamide, and I would like to add another case to this list, a compound fracture of the tibia with B. welchii wound infection, which recovered following administration of sulfanilamide.

Dr. Philpot, in his discussion, mentioned the use of skeletal traction for fractures of the humerus. I think it is excellent and use it, but I want to caution you that it is very easy to cause over-traction on a fracture of the humerus—separate the ends of the bone just sufficiently to bring about non-union.

I enjoyed Dr. Ross' paper very much.

DR. THOS. H. BLAKE (Jackson): I have enjoyed this paper very much and the discussion also. There is one point I would like to bring out and emphasize a bit more, that is the use of gas gangrene antitoxin. I have seen a number of cases and in each case that I have seen in private practice that has developed gas gangrene, each case was given the commercial dose of antitoxin as put up by the biological houses. They are putting it up in 2000 units. That is not sufficient. The prophylactic dose of gas gangrene antitoxin is approximately the same as the curative dose, at least 10,000 to 20,000 units, preferably 20,000, and in compound fractures where there is a chance of infection, it is an excellent idea to give more than one dose of antitoxin.

DR. ISIDORE COHN (New Orleans, La.): To say that I was proud of Dr. Ross when he was talking is putting it mildly. For a long time I talked to him from the other side of the bench, I am very happy to have heard the splendid presentation he gave. Many of the things he said I subscribe to. I would like to emphasize the importance of one thing which all of us should be interested in, and that is first aid for fractures which is being fostered by the American College of Surgeons, with the assistance of the American Red Cross. Many of you must have noted on the highways a little sign "First Aid Red Cross Station." Those stations were recommended by the American College of Surgeons Committee on Fractures and the work has been carried thru by the American Red Cross. It cannot however, be carried through to the ultimate satisfaction of all unless one thing happens and that is that those of us in our own community see that in the large industrial plants there are teams trained for the first aid management of fractures and injuries of all kinds. Particularly do I address myself to the use of the Keller splint or if you haven't that the Thomas splint and the other splints which are so necessary for the handling of these injuries.

If we can train people in the various large industrial plants to render proper first aid we will have very much less trouble when patients arrive at hospitals.

With reference to the use of tetanus and gas serum, it is my conviction that wherever tetanus antitoxin is indicated gas serum is also indicated.

A few years ago Dr. Sherman, in discussing this, said, "In all of my industrial work in the mines, I have never seen a case of gas gangrene."

Many have the idea that gas gangrene is only found in certain sections of the country. Let us remember that the organisms which produce gas gangrene have been found in wool, and, therefore, many of the people who are wearing their wool clothes that are dirty, have more chance of harboring these germs than others.

With reference to the use of skeletal traction by contrast with the plaster cast, I believe in many instances it is better to apply skeletal traction and put the patient in suspension, and not put a cast on at all. Instead of tight wound closure I would prefer retention sutures for the vaseline pack. The wound can drain better and there is less chance for infection. The things which cause infection are heat, moisture, dead and dying tissue. When we have a cast on we have all the conditions favorable to infection, whereas if we leave it open there is less chance for tetanus and gas gangrene. Thanks.

DR. ROSS (closing): I would just like to thank these doctors for their very generous discussion, and especially my old professor.

203 Front Street.

Some Aspects of Psychotherapy*

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The word "nervous" or the statement "a nervous case" may mean any one of three distinct things. For example, it may denote a case in which the symptoms are connected with some form of organic disease or a disorder of the nervous system. Should these symptoms be traced to physical rather than mental causes the patient may be called nervous, but a condition of this sort is most certainly within the field of the neurologist.

Again should the symptoms of "a nervous case" give evidence of the existence of a psychosis, such as paranoia, manic-depressive insanity or the like, and no evidence of organic lesion is found in the nervous system, we should say that the symptoms being predominantly mental and the obvious condition of the patient making it unsafe for himself as well as society to be free, such a case becomes the study and work of the psychiatrist.

There are, however, mental and nervous cases in which there is no evidence of organic nervous lesion nor definite psychosis in the sense referred to a moment ago as belonging to the field of the psychiatrist.

These symptoms may be physical or they may be mental or they may be both. The patient, however, is aware of a maladjustment within the self and in realizing this situation the patient seeks relief, while at the same time he is able to maintain reasonable control of himself and his conduct to be able to comply with the demands of society. These cases belong to the study of the psychotherapist.

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*Read before the Issaquena-Sharkey-Warren Counties Medical Society, Vicksburg, June 14, 1938.

It is quite true that while these three fields, neurology, psychiatry, and psychotherapy, are separate and distinct from one another, they do overlap to such an extent that it is theoretically impossible to give a definition of any one to the exclusion of the other two. They have to work hand in hand. I believe, however, that each one of these three branches is so tremendous in scope and so highly charged with the difficulties peculiar to its own branch that it is practically impossible for one to be a specialist in all three. These branches are not, however, interchangeable; they overlap in many respects and the specialist in one branch should have at least some knowledge of the other two. Clinical psychiatry would not produce a competent psychotherapist or neurologist, and the neurologist is not *ipso facto* ably qualified to carry out the work of a psychoanalyst. Co-operation is, therefore, imperative among these three branches.

If we take a cross sectional view of modern life, it becames obviously clear that a large number of people are engaged in the business of making a living but are totally unfamiliar with some of the simple laws connected with the matter of adjustment of the self to its environment. In fact, the matter of **self knowledge**, even on its simplest plane, is virtually absent. An adult is a problem solver, and the problems of modern life are hard and fast. It is rapidly becoming a question of the survival of the fittest. Into this complex civilization human beings are thrown; some have learned the art of solving problems, the art of fighting and hitting back when life strikes at them, but others do not know how. These maladjusted people fill the offices of physicians. They have nothing physically wrong with them but they insist that they have and if one physician tells them they are normal they will go to another and still another until they find one who will agree with them, listen to their tales of woe and feed them bread pills.

The truth of the matter is those people have developed a defense mechanism of some sort. Most of these defense mechanisms originated in childhood. It was easy to play sick when they were children for in so doing they received attention and were even excused from school duties. Now in adulthood ill-health becomes an advantage because the plea of illness never fails to be effective. These people may be escaping from some sort of fear as most of these so-called "nervous breakdowns" indicate; others may be running away from a specific conflict which they dare not admit to themselves or to others. Some of these escape mechanisms manifest themselves in pathological forgetting, in sleep-walking, in fainting spells, in double personalities, in sensory defects, in motor disorders, in nausea, and some even go so far as to develop operative diseases. In the last analysis these people are merely grown-up physically but are depending on baby tricks to solve their problems—childish ways of running away from reality. These people were never taught in youth to face problems squarely and fight them directly. I believe that gullibility on the part of the parents, teachers and physicians provide much of the soil in which these conditions I have indicated grow.

Without venturing too far into the subject let me briefly indicate the psychoanalytic theory. We know, for example, that as soon as the newborn babe brings its respiratory mechanism into play it passes from the parasitical stage which it enjoyed in its mother's womb. This first disturbance provokes crying—from then on the matter of adjustment becomes important and crying, a condition for comfort. The steady growth and adaptation to reality begins. The system operates on the basis of seeking pleasure and avoiding pain. The unconscious mind seeks pleasure but ignores reality; the conscious mind accepts reality and attempts to make adjustments between the urges of the unconscious to which reality does not exist and the outside world where reality does exist. Sometimes these two systems do not agree. When the conscious mind is unable to gratify the urges of the unconscious and banishes them from consciousness, repression is the result. The conscious mind deals with what is logical, acceptable to society, moral, altruistic—these things having to come to consciousness through education and, especially, through the demands of a civilized society.

When this repressed material is connected with any one of the three major instincts, it naturally draws its energy from it and continues to exist below consciousness, attracting to itself thoughts that are akin, thereby growing larger and more powerful in the hope that some day it will manage to break through the censorship of conscious life.

Sometimes the individual is able to sublimate this material; inability to do so may lead to perversion. The fact that the material is repressed does not keep it from attempting and succeeding in returning to consciousness in a distorted form. It then appears to consciousness unrecognized and in doing so psychoneurotic symptoms are in evidence.

Mental disharmony is the sole cause of a number of bodily, nervous and mental symptoms and the disharmony is due to these peculiar complexes which are alien to the personality that has refused to acknowledge them. The energy produced by these complexes is expended in producing and maintaining some bodily, nervous or mental disturbance.

When a psychological conflict arises, it is not pathological as long as the patient fully realizes that the conflict exists and is determined to follow some course of action to bring about proper adjustment. There are many cases, of course, in which the sex element is of minor importance but the majority of psychological conflicts are usually located in some phase of the sex instinct in its relationship to some branch of the "herd tradition."

The purpose of the psychotherapist is to bring these hidden complexes to consciousness so that they may be recognized, acknowledged and absorbed by the personality. The emotion and energy belonging to these complexes will not longer be dissipated in producing symptoms.

The methods used by psychotherapists are: suggestion, persuasion, and psychoanalysis which includes free association, word association, reaction word and time, dream analysis and hypnotism. These methods help to stir up the dregs as it were, and allow them to settle in a more natural position in order to bring about integration of the personality. There are many different theories on the value, use, and application of these methods. The practicing psychotherapist considers all of them in the light of their practical application to situations but eventually combines the fruits of his own experience with the fundamental principles of psychotherapy and soon develops a theory and technique all his own. Re-education of the patient is the procedure which follows the analytical investigation. This takes time and patience. Therapeutic conversation is also essential.

Of course, regardless of what the critics say about the assumptions, inferences and practice of psychotherapy, they have to admit that there is no really broad and comprehensive theory of the neuroses nor even an intelligible pathology of them to be found except that which is laid on the foundation of the psychoanalytic theory. In fact, it is hardly possible to discuss the symptoms of the psychoneurotic or his treatment without having to borrow the conception and phrases of the analyst. It is always good advice never to criticize a point of view unless we are prepared to offer an alternative. One becomes suspicious that those who oppose these methods may be showing their own need of its healing power.

After all what is the meaning of the word, "cure"? Is it not the fact that a patient is placed in a position where he is able to adapt himself successfully to his environment? If such a result is achieved by these methods, they are certainly serving their purpose.

Let us bear in mind that the cause of a neurosis is not in the material that is repressed but in the fact that it is repressed, and if psychotherapy and its re-educational methods help to break up this condition, at least it is creating one less obstacle between the patient and health.

Birth, death and religion seem to be the three fundamental problems with which a neurotic is concerned. To find a neurotic without sex worries of some sort is almost a contradiction in terms. The physician whose outlook is wide enough to meet his patient on these grounds will obtain sufficient confidence on the part of the patient to bring about good results even in the simple conditions which confront him in his routine practice.

Of course psychotherapy will not reduce a dislocation nor will it heal a perforated gastric ulcer but it is true that psychotherapy can alter blood pressure, dry up secretions, deeply affect the functional activity of glands. In fact, at the moment, it becomes hard to set limits to its effective scope. Perhaps, later on, when we have fully determined the extent of the influence of mind upon body, we may then be able to set limits to the possibilities of psychotherapy.

Agranulocytosis*

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Agranulocytosis or agranulocytic angina was so named by Schultz in 1922 as a symptom-complex, his clinical description remaining classical : acute onset, prostration, fever, chills, gangrenous mucosal lesions and marked leukopenia, and in most cases a rapid fatal course. It is no longer considered a rare disease. According to Stork there were more than a thousand deaths due to this disease reported in the past four years in the United States alone. It is a condition in which there is a marked reduction in the total number of white cells in the peripheral blood and a great decrease in the percentage of granular cells. It is the result of a disturbance of bone marrow function which interferes with the natural development and delivery of granulocytes to the circulating blood.

The course of the disease varies from the acute case which may terminate fatally in a few days to the chronic case which may last for months. Apparent good health for awhile may be followed by relapses. The chronic forms constitute about twenty-five per cent of all cases.

The most frequent age incidence is between forty and sixty, no age being exempt. The disease is twice as common in females as in males and is rarely found in the negro race. It has been observed particularly in individuals of the upper and middle classes and especially in physicians, dentists, nurses and medical students. Sufficient evidence has accumulated to conclude that amidopyrine and related drugs are a most important, if not the most important, etiologic agents in agranulocytosis. Other drugs indicted are pyramidon, acetanilid, phenacetin, peralga, diai, amytal compound, allonal, dinitrophenol, arsenobenzol, gold salts, and quinine. There is no case in the literature charged to aspirin.

Nutritional factors may play a part more important than is at present recognized.

Thompson suggests that there is some relationship existing between the hormones associated with menstruation and agranulocytosis in certain cases.

Just how important a part toxic causes play is not definitely proved, but bacterial infections have an important role. The enteric group, typhoid, paratyphoid A, and paratyphoid B are well known to be associated with a leukopenia and specific diminution of the granular leukocytes. Watts, Willcox and Warner suggests that those cases not infrequently seen in the past, when typhoid fever was much more prevalent and severe, and in which a membrane was found in the throat and respiratory tract, were associated with agranulocytosis. Chronic tuberculosis is occasionally associated with agranulocytosis.

A fulminating streptococcal or staphylococcal septicemia may give rise to agranulocytosis. Pneumococcal infections though usually associated with leukocytosis may rarely cause agranulocytosis.

Protozoal diseases, such as kala-azar, malaria, and amebic dysentery have been described as causes.

Virus diseases and those of doubtful causation such as influenza, measles, mumps, dengue fever, sandfly fever, and smallpox are often associated with leukopenia of the firanular leukocytes.

The symptomatology of the acute case presents a dramatic picture of a sudden onset, chill, high fever, and necrotizing angina. There is extreme prostration and paleness, and there may or may not be jaundice. In these cases there is usually ulceration of a gangrenous type that may develop on the gums, tonsils, soft palate, lips, pharynx, nose, uterus, vagina, rectum, or anus. A dirty-yellow, gray or greenish-black membrane may be found. The lesion is characteristically non-marginated and there is very little reaction in the neighboring tissue. Slight regional adenopathy may be noted. The liver and spleen may or may not be enlarged. The subacute case differs from the acute case only in the severity of the symptoms and its extremely high mortality rate. In the chronic cases there is often a long history of mental and physical fatigue succeeded by a period of extreme weakness, and exhaustion after slight effort. Some degree of secondary anemia is much more common than in the acute cases. Neuritic and fibrositic pains tend to develop, and the patient loses weight, this is often accompanied by hysteria and extreme depression. Secondary to this poor physical condition and lack of granulocytes inflammation arises, particularly in the alimentary tract. These cases may have periods when the physical and clinical findings are much improved, then followed by relapses. Any relapse may prove fatal, but the prognosis is better than in the acute type.

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*Read before the Delta Medical Society, Rosedale, Miss., April 13, 1938.

The laboratory findings in the acute, subacute and chronic cases, are essentially the same, except, some degree of secondary anemia is more likely to be found in the chronic type. There is a marked leukopenia the degree of which corresponds fairly well with the clinical picture. The leukocytes are usually reduced to 2000 to 1500 cells per c.m. in the subacute and chronic cases and to less than 1000 in the acute fulminating cases. There may be as few as 100 white corpuscles per c.mm. The percentage of granulocytes may be as low as five or ten per cent, or they may be entirely absent. Platelets are usually normal in number. Positive blood cultures have been found in a number of instances, and of a great variety of organisms, but these are usually considered to be secondary invaders. Throat cultures also have revealed many types of organisms.

Treatment: No form of treatment can as yet be considered specific. The main lines may be thus summarized:

(1) Rest in bed and quiet to diminish the exhaustion and fatigue.

(2) Careful attention to the mouth and to any lesions is essential. Hamburger advised spraying the mouth and throat after each meal with a saturated solution of potassium chlorate, and swabbing ulcerated areas with two per cent copper sulphate solution.

(3) Operative interference of any kind (such as tonsillectomy, extractions or incision of inflammatory areas) must not be performed until a protective barrier of granulocytes is available, as shown by repeated blood pictures.

(4) According to Minot the diet should be rich in Vitamin B to help restore the bone marrow to normal. The diet should contain a liberal supply of: asparagus; kidney, navy and soy beans; raw cabbages; raw tomatoes; fresh fruit juices; and lean meat. Possibly ascorbic acid may prove helpful.

(5) Pentnucleotide is undoubtedly the most rational remedy for agranulocytosis as it stimulates the maturation of the primitive white cells into granulocytes with little or no protein-shock reaction. Jackson and Parker recorded a recovery rate of seventy per cent in over a hundred acute cases of agranulocytosis. They recommend 40 c.c. daily given in 10 c.c. doses intramuscularly. If the reactions are very severe they restrict the dosage. In very desperate cases it can be given intravenously.

(6) Frequent small blood transfusions of whole or citrated blood have given most favorable results in the hands of some. However, where there are signs of jaundice or liver exhaustion they should not be given, as an increased strain on the liver will result in a breaking down of the blood and a destruction of the elements. Gordon recommends forty c.c. of whole blood intramuscularly twice a day in the same site of injection, as the irritation of the muscular tissue probably produces a substance which stimulates the bone marrow. Ravina reports three cases, treated by frequent small transfusions of blood from leukemic patients, with marked success.

(7) Yellow bone marrow given orally in daily doses of 200 to 300 grains has been advocated.

(8) Liver extracts both orally and intramuscularly, splenic extracts and ventriculin have been used with indefinite results.

(9) X-ray irradiation in minimal doses to the long bones has been tried with varying degrees of success.

SUMMARY

(1) Agranulocytosis is far from a rare condition. Blood counts should be made whenever you encounter unexplained weakness, exhaustion or drowsiness.

(2) The chief etiologic agent is amidopyrine, pyramidon, and related drugs.

(3) Treatment should be instituted before the granulocytopenia has permitted the development of septicemia.

(4) The acute cases must be distinguished from generalized septicemia, miliary tuberculosis and such causes of severe sore throat as acute tonsillitis, Vincent's angina, and diphtheria.

(5) The blood picture is typical with a marked decrease in leukocytes and an almost absence of granulocytes.

(6) The treatment of choice is pentnucleotide, and this, if given in conjunction with frequent small blood transfusions or irradiation of the long bones with minimal doses of roentgen rays, may enhance its value.

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EDITORIALS

"TWO BIRDS WITH ONE STONE"

At the annual meeting of the American Medical Association at San Francisco, The Indiana State Medical Association presented a plan for the performance of public health services in doctors' offices. This was designated as a means of killing "Two Birds With One Stone;" the two birds being Socialized Medicine, and Disease and Death.

The plan was presented to the House of Delegates and was approved in principle by action of the House, which instructed the Bureau of Health and Public Instruction to publicize the plan and call it to the attention of component and constituent societies. It is suggested that societies adopt and put into effect as many features of the plan, or implications thereof, as are practicable under conditions in their own communities and to report the results of any local application of the Indiana plan both to the Indiana State Medical Association and to the Bureau of Health Education, American Medical Association.

Inaugurated January 1, 1938, the Indiana State Medical Association's program, described as "an idealistic effort to safeguard the health of all individuals," already has attracted the attention of national authorities on health and medical problems.

With the journal of the state association as a central forum for an educational program conceived to prevent illness, county medical societies have concentrated each month this year on a specific disease or health problem of paramount public importance. Co-ordinating their work with the program of the Indiana State Board of Health, the various societies have furthered their educational work through luncheon clubs, parent teacher associations, and other lay civic organizations.

The program as outlined in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Vol. 111, No. 1., page 49, contains the following:

AN ANTIDOTE FOR STATE MEDICINE

Frequently today the physician finds articles in the press questioning his efficiency and his methods of practice. Such articles accuse him of ignoring preventive medicine in his daily work. He is bewildered and defensive in his attitude, for he feels that he is doing his job well. Even superficial observation will disclose the marked drop in death rate as a result of measures instituted by the medical profession in controlling tuberculosis, malaria, typhoid, diarrhea, yellow fever, puerperal sepsis and other infectious diseases. Preventive medicine is now being practiced by all physicians as private practitioners to some degree. In many parts of the state, county medical units have a definite program. The time is ripe to correlate these scattered activities, survey our local situations, and acquaint the public with the extent of this phase of our work.

Many phases of preventive medicine have advanced by stimulation from outside. Preventive medicine has now reached its maturity and should be utilized to the fullest by organized medicine and by the individual doctor. It is futile for one county or state to try to promote this alone. Disease and disaster are not aware of state borders. A national policy on the part of organized medicine is needed now.

Too long have we kept our light under a bushel. It is time to take the offensive. The amount of preventive medicine can be increased by the private practitioner with definite benefit to his community and to himself, and the public will be made to realize that American Medicine is pliable enough to continue as an individualistic enterprise.

Throughout the ages, medicine has adapted itself to social changes. We are now in one of those states of changing social customs and aspirations. The American public looks to organized medicine for leadership. Prevention of disease, early recognition of defects and diseases, reduction of hazards and prolongation of life are the important functions of a physician.

In Indiana we have visualized preventive medicine as a wheel with each spoke representing some important phase. Each phase is featured as a "Topic of the Month" in the JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION and is announced or discussed in each county medical society the month the subject is featured. The topic of the month is given support in the press and is discussed by speakers before medical and lay groups.

TOPICS OF THE MONTH

January—Formulation of Plan.
February—Syphilis.
March—Pneumonia.
April—Diphtheria.
May—Maternal and Child Health.
June—Crippled Children
July—Highway Accidents.
August—Occupational Diseases.
September—Annual Physical Examinations and Heart Disease.
October—Conservation of Eyesight.
November—Tuberculosis.
December—Smallpox.

PURPOSE

To promote aggressive leadership by Organized Medicine in Prevention of Disease and early detection of defects.

To incorporate preventive medicine as an important phase of private practice and of county medical activity.

To promote a National Health Program with emphasis on Prevention of Disease sponsored by the American Medical Association with due regard for local situations.

Our modern age demands co-operative efforts by organized medicine to distribute modern medicine.

DIVIDENDS OF RESULTS

1. Create good will and public approval.
2. Raise general standard of medical practice.
3. Prevent many deaths and much suffering.
4. Give a better ordered life for the doctor.
5. Give a steadier income for the doctor.
6. Intelligent defense against disease is our best defense against governmental encroachment.

ALTERNATIVE

Noisy and aggressive lay groups will seize leadership and we will trail behind, cloaked with heavy governmental supervision.

THE INDIVIDUAL'S MEDICAL SERVICE CHART THROUGH LIFE

——Three Months Pregnant——

Measurement of pelvis
Blood pressure—urine
Wassermann test
Reduction in maternal mortality
Prevention of congenital syphilis.

——At Birth——

Silver nitrate in baby's eyes
Prevention of blindness (ophthalmia neonatorum).

——First Week——

Physical examination of baby
Recognition and correction of remedial defects.

——First Year——

Correct infant feeding
Prevention of diarrhea, rickets and scurvy.

——One Year of Age——

Immunization and vaccination
Prevention of diphtheria and smallpox.

——Two to Fifteen——

Annual check-up by the family physician.
Individual health education.

——Sixteen Years——

Physical examination with special attention to lungs.
Prevention and early recognition of tuberculosis.

——Before Marriage——

Premarital examination.
Recognition of venereal diseases.

——Adult Life——

Annual physical examination.
Prevention of heart disease.

——Reduction in Hazards——

1. Venereal disease.
2. Pneumonia control.
3. Highway accidents.
4. Typhoid.
5. Nervous disorders
6. Occupational disease.
7. Cancer.

Bureau of Publicity
Indiana State Medical Association
1021 Hume-Mansur Building
Indianapolis, Indiana

(Societies interested may obtain reprints from The Journal of the American Medical Association setting forth the details of the Indiana Plan on request to Leon S. Lippincott, Editor, Vicksburg).

SOME IMPRESSIONS OF THE NATIONAL HEALTH CONFERENCE

Edgar Blake, Jr., of the Methodist Hospital of Gary, Indiana, in Hoosier Hospital Harmony of September gives some impressions of the National Health Conference held in Washington, D. C., July 18 to 20, should be of interest to doctors and hospitals. He says,

"From the viewpoint of hospitals, both voluntary and tax supported, it was undoubtedly the most outstanding meeting that has ever been held. No hospital administrator can afford to be without knowledge of the proposals of the President's Inter-Departmental Conference. These are published in full in the A. M. A. Journal of July 30, and should be read and studied by all administrators.

"Space will not allow me to give my opinions of the plans, however, to understand the discussion one must know who made up the Conference. There were doctors, dentists, hospital executives, social workers, editors, farmers, workers of A. F. of L. and C. I. O., educators, and people already in the organizations representing co-operative plans of medical or hospital care. Some of the above people were officers of their respective organizations, others were appointed. On the whole it was a very representative group.

"Here are some impressions from attending the Conference:

1. There is no denying that there is need for greater attention to health problems, especially the cost of health care.

2. The technical committee of the government has made a very thorough study and their facts appear irrefutable.

3. Some newspapers seem to be laughing it all off as another "New Deal Dream." I do not think this is true. Several people who spoke in favor of the plans certainly could not be called "New Deal" sympathizers.

4. A new group has entered into the question of medical care, namely, "The Consumer." This group undoubtedly will demand more and more consideration.

5. If any changes are made no one wants anything comparable to a panel system. The free choice of doctor and hospital was not disputed.

6. The farm and labor leaders (and what a large percentage of our citizens they represent) are doing a great deal more thinking along these lines than many of us believe.

7. There was opposition to the A. M. A. especially by farm and labor representatives—not against doctors as individuals but against what seems to them to be the reactionary policies of organized medicine regarding the economic problems of medical care.

8. The "so-called rebels" or "430" group of doctors represent a very strong group of men and seem very determined to bring about certain changes.

9. Wholehearted endorsement of the plans was given by editors of many of the leading magazines of the country.

10. The vastness of the plans will mean that it will take several years to put all of them into effect. Due to opposition many will be modified as they now stand.

"To bring it right down locally in Indiana, should we, as hospital executives, be for or against the plan? That is for each one to decide by a careful study of the plans. I believe our hospitals in Indiana will be effected by the proposals of the Washington Conference in the following manner:

1. There will be a marked increase in the diagnostic services in the hospitals.

2. Hospitalization will be greatly increased among the low income class—that group just above the indigents. However, plans similar to Hospital Care Insurance will provide for the expenses of hospitalization.

3. Many hospitals will be obliged to provide much more adequate diagnostic services than they now have. This, I believe, is especially true as far as pathologists and roentgenologists are concerned.

4. Nothing I read or heard made me believe that the government considered taking over the management of existing hospitals.

5. As I hear plans which have been tried in various parts of the United States I realize how little has been done in Indiana to study and experiment with newer methods of providing hospitalization.

6. My feeling is that the hospitals of Indiana should take steps to make possible voluntary methods of hospital care insurance. If the hospitals and doctors throughout the country had worked out voluntary plans of this sort a few years back I do not believe the government would be stepping in at the present time.

"Whatever we do is going to take a great deal of co-operation among all people concerned if new methods are to be worked out to extend our hospital facilities to all people who need them.

"My attendance at the National Health Conference makes me believe very firmly that in working out any plans in Indiana no one group will be able to do it alone. In the plans that concern hospitals it will require not only the co-operation of the doctors and our civic leaders, but at the same time we must bring into our councils the representatives of the farm and labor organizations. These two groups lifted their voices in health matters for the first time at Washington and it was a lusty voice. They are the ones who suffer most from our present set-up. They want to be heard when plans are formulated for the future and my opinion is that they will be heard."

MEDICAL DIAGNOSIS

In a little more than a century, the medical profession has probably done more for the people of the world than has ever been accomplished by any other body of men. Gifts to humanity have come in the form of vaccination, sanitation, anaesthesia, aseptic surgery, the comparatively new science of bacteriology, and the art of therapeutics. They have effected a revolution in our civilization.

Medicine is the most difficult of sciences and the most laborious of the arts. It taxes the powers of body and mind.

The hospital has reached its highest development in the United States. It is better organized, far better managed, and reaches a larger section of the population here than in any other country. This service should not be overlooked. All of the benefits that follow the advance of medicine and the development of the hospital are passed on to the doctor's patients.

While, as compared with present day medicine, the early history of medical education in this country seems a story of feeble resources, still always there was high endeavor and a just appreciation of the requirements of training for a learned profession. Usually there was a measure of practical instruction, teachers were of high character and gifts, and the sound traditions of the physician's calling were preserved.

Noteworthy in the last two decades has been the development of laboratory teaching from the weakest to the strongest position in the curriculum of our medical schools. Coincident and most gratifying has been the growth in this country of the sciences of physiology, pathology, biologic chemistry, pharmacology and bacteriology.

An important activity of the modern hospital and also of the doctor's office is the clinical laboratory. There is bedside study and laboratory study. Every case of illness deserves careful investigation, no matter how much has already been learned about similar cases in the past. Every patient is an individual —he is not exactly like any other. A series of facts must be recorded continuously in order that definite scientific inferences may be drawn from them. The purpose of all this study of the individual patient is to provide the physician with accurate data which will not only enable him to do most for that patient but will help him to be of further benefit to the next sufferer in line. The laboratory worker includes in his studies the so-called fundamental sciences of medicine—pathology, bacteriology, serology, physics, chemistry, and biology. Medicine has a number of brilliant pages to its credit, pages which would never have been written had it not been for the investigative mind of the laboratory worker.

The doctor's success in diagnosis is dependent upon his knowledge of Nature's method of response to various insults and injuries of all kinds, and upon his ability to assemble and evaluate the evidence of disease and to interpret it correctly. Three considerations enter into the making of his diagnosis; (1) the history, or what the patient can tell of his illness; (2) the physical examination, or what the doctor can learn directly by means of his five senses on examining the patient; and (3) the laboratory study, or what the doctor can learn indirectly through the scientific investigation of the patient—of the tissues that make up the body, the blood, the body juices and the excreta.

Diagnosis would not be so difficult, perhaps, were the causes of diseases always apparent. The patient comes complaining, not of a disease, but of symptoms. It is the doctor's function to obtain as accurate a story as possible, to find the signs of disease, and elicit such other evidence as is important in establishing the nature of the underlying defect. He should also seek its cause. Efficiency consists in determining the real nature and cause of the trouble. It has been said that treatment is easy when an accurate diagnosis has been established.

Sometimes the diagnosis is best achieved through a careful analysis of the history, sometimes by prolonged observation and repeated physical examinations, and at other times through one or more laboratory examinations. But in obscure cases all of these sources of information may be taxed to the very limit.

A patient may, for example, consult his physician because of the remarks his friends have been making recently about the yellowish color of his skin. He has never had this peculiar color before, nor has any member of his family been similarly afflicted. His only complaint is that he is "lacking in pep." The doctor makes his examination and finds the skin and the white of the eyes of a yellowish color, and in addition the spleen is somewhat larger than normal. The cause of the jaundice will be revealed only by further examinations. It might be simple catarrhal jaundice due to swelling of the linings of the bile ducts, or obstructive jaundice due to gall stones, or cancer obstructing the flow of bile from without the ducts. or, it might be due to quite a different cause, the excessive destruction of the red blood corpuscles, the hemoglobin or coloring matter of which is the normal source of the bile pigment, the excess appearing in the skin and eyes.

In this case, the history and physical examination fail to yield the diagnosis, and the assistance of the laboratory must be invoked. The presence of adequate amounts of bile in the stool proves that the jaundice is not the result of complete obstruction of the bile duct leading to the intestine. The bile pigments in the blood are next investigated and are found to be increased in amount, let us say to three times normal. Furthermore, the type of reaction excludes obstruction of the bile passages.

Perhaps then, the excess of bile in the blood is due to excessive destruction of the red blood corpuscles. In this connection, we must remember that the red blood cells of the body are being constantly broken down even in health. If unduly fragile, they are found to disintegrate more readily than normal when suspended in increasingly dilute solution in test tubes. By this method, in this case, the fragility of the red corpuscles is found to be decidedly increased. This furnishes the evidence that the jaundice is probably due to increased destruction of the red blood cells.

The spleen has been found to be enlarged, and it is known that this is likely to occur when it is over-worked in the destruction of blood cells.

As the result of these studies, the diagnosis of hemolytic jaundice is made. The treatment to be carried out is based on the conception of over-activity of the spleen, which is, therefore, removed. The jaundice disappears and the patient recovers his usual health.

Certain tests yield information of such crucial importance that they have become a part of the so-called "routine examination" of the patient. Accuracy demands them. Experience has taught us that despite the greatest amount of clinical skill, certain diseases escape recognition unless these routine methods are employed. These tests include examination of the urine (urinalysis) and the study of the blood from the standpoint of the number of red and white corpuscles and the concentration of the oxygen-carrying component of the blood. In addition a search for malarial parasites is usually made, and the Wassermann test for syphilis has proved so valuable that despite its technical difficulties, it too is almost routine with most doctors. By these examinations, regularly made, the presence of serious diseases such as Bright's disease, anemia, diabetes, malaria or syphilis is first made apparent or suspected when the history and physical examination have failed.

Urinalysis has an important bearing on diagnosis. The clues to disease it affords are almost innumerable. It takes into account the amount of urine in 24 hours, its color, reaction, specific gravity, the presence or absence of albumin and sugar, and the forms of sediment recognizable upon microscopic examination.

A test for albumin is easily made. When present, the amount should be determined. Albumin in the urine may be simply the result of exposure or a cold bath, or it may be due to posture. It may mean disease of the kidney, inflammations of various kinds, Bright's disease, congestion as a result of a failing heart, back pressure and obstruction in the urinary tract, caused by enlargement of the prostate gland; or it may be the result of infection of the kidney or other parts of the urinary tract as in tuberculosis. Its true significance can be determined by further studies.

Another routine test of the urine is that for sugar. The presence of sugar does not, of necessity, indicate diabetes, since the sugar present may not be glucose. It may be milk sugar, which appears during pregnancy or during the period of nursing.

Even when it has been decided that glucose is present, the diagnosis is not established. It may indicate merely the excessive eating of sugars and starches; or may be caused by some undue strain on an unstable nervous system. It may indicate disease of the brain or prove to be an interesting clinical condition in which the kidney allows sugar to appear in the urine when the blood sugar is normal. But when the glucose persists in the urine and the sugar in the blood is found to be increased, when the patient presents the clinical manifestations of diabetes, the diagnosis can be considered established and treatment may be instituted. Sometimes in early cases, it may be necessary to do a glucose tolerance test by giving a definite amount of glucose and following by frequent examinations of blood and urine over a period of several hours, to establish the diagnosis.

Another routine procedure in approved and standardized hospitals is the microscopic examination of all tissues removed surgically. This is particularly important in dealing with various kinds of growths and tumors as a guide to further treatment and as a means of foreseeing what is likely to happen in the future. The doctor and the patient or his family should know whether a growth is cancer and possibly capable of causing death, or simply a benign lesion, which once thoroughly removed, will cause no further trouble. Often a small portion of a growth is removed and examined before treatment is instituted. By microscopic examination the degree of malignancy in certain types of tumors may be determined.

There are many other procedures carried out in the clinical laboratory which may be of great value in proving or disproving the presence of disease. Chemical examinations of the blood are perhaps most used to establish the severity of kidney disease and to follow its progress, but are important in many other conditions. Studies of the contents of stomach and intestines are made in disorders of these organs. The feces are examined for parasites such as hookworm, tapeworm, and roundworm. Smears of pus and discharges are examined for the organisms of gonorrhea and syphilis or other infections. Examination of such discharges provides the earliest method of finding syphilis, usually at least a month before it is shown by blood tests. Smears from the mouth are used to show the presence of so-called "trench-mouth."

Sputum is examined for pulmonary tuberculosis and to determine the type of pneumonia. Fluid from the spine may show the presence of meningitis or syphilis of the nervous system.

Bacteria are the cause of many diseases and the science of bacteriology has to do with their study. Any of the secretions or excretions or any part of the body may be examined to determine the presence and type of infection—the throat for diphtheria, the blood for typhoid or other organisms, the urine for kidney or bladder infections, the skin for the cause of boils and other lesions. Bacteria isolated may be used to prepare vaccines for treatment.

Blood serum, blood from which the corpuscles have been removed, is tested to aid in the diagnosis of typhoid fever, undulant fever and similar diseases. Blood must be typed and proved capable of mixing with that of the patient before it can be safely used for transfusion. Basal metabolism determinations are valuable in the diagnosis of goitre. There are many other procedures regularly done which may be of real value to the patient and the doctor.

Medicine advances steadily. A life is saved today not so much by the genius of one man as by the unremitting efforts of generations of scientists. Science provides the key to the problems of life and disease, and the laws of the universe find a common meeting ground in the laboratory.

It is from the clinical laboratory that we may reasonably hope for a more penetrating insight into the causes and nature of many diseases, an insight which perhaps may arm physicians with a saving power of prevention and treatment of some of the organic diseases of advancing life comparable to the inestimable gifts of the bacteriologic laboratories to the treatment and prevention of infectious diseases.

"Honor a physician with the honor due unto him; for the uses ye may have of him; for the Lord hath created him."—Ecclesiasticus of the Apocrypha, Chap. XXXVIII.

UNDULANT FEVER (BRUCELLOSIS)

In 1937, there were reported in Mississippi 22 cases of undulant fever or brucellosis (Public Health Reports, 53: 1195, July 15, 1938). This is the highest incidence yet reported. The United States Public Health Service began receiving reports of cases of brucellosis from the various states in 1927. Only 112 cases were reported in that year, but by 1937 the number had increased to 2,497. Undoubtedly the total number of cases actually occurring is much larger than reported.

For many years brucellosis escaped attention because of the manifold manifestations. It is caused by infection with a specific bacterium of the genus **Brucella.** These bacteria may infect various kinds of domestic animals as well as man. In this country, cattle, hogs and goats are of importance in transmitting infection to man. The incidence in cattle varies from 10 to 30 per cent, with an average of about 14 per cent.

Farmers and veterinarians who handle infected animals and slaughter, house workers who handle infected carcasses, may become infected through the skin, particularly through abraded skin.

In this country, there are three important varieties of infecting organisms and all may infect man. In localities where cattle are associated with infected goats or hogs, they may become infected with the goat or hog variety of causative organism, and transmit it to man.

In man brucellosis varies from a mild ambulatory disease to severe illness, with symptoms from a few days to many years. A mild attack may be mistaken for influenza or pass without diagnosis. If the disease is more severe, the original diagnosis may be tuberculosis, typhoid fever, malaria, or rheumatism. Correct diagnosis is often difficult.

In chronic cases a characteristic feature is the great variety of aches and pains the patient has although he may appear healthy. In many such cases a diagnosis of neuresthenia may be made from the exhaustion, insomnia, irritability, and complaints of aches and pains for which no objective signs can be found.

Brucellosis may be a cause of death, 58 such deaths having been reported in the United States in 1937.

The majority of people have no direct contact with **Brucella**—infected animals; for them brucellosis is a preventable disease. If all milk were efficiently pasteurized or boiled before being consumed, there would be no brucellosis except in occupational groups whose work brings them into contact with infected animals or infected carcasses.

The laboratory diagnosis of human brucellosis is not always easy. An evaluation of diagnostic laboratory tests is given the Public Health Reports of August 26, 1938, by

Alice C. Evans, et al. It is shown that diagnosis can be unquestionably established by isolating the organism from the patient but that this is accomplished only in a relatively small percentage of cases. No other **single** test can be relied upon to determine **Brucella** infection.

A positive intradermal skin reaction may be regarded as suggestive of infection although less reliable evidence than a positive agglutination reaction.

The opsono-cytophagic test has been found to be the last reliable of the specific tests because positive reactions are not uncommon in cases of illness with other disease.

Cases of **Brucella** infection may occur in which all three specific tests give negative results.

Brucellosis probably causes more illness in Mississippi than is generally recognized and may be a cause of death. It behooves the doctors to bear it in mind and to use all available aids in arriving at a correct diagnosis.

"The skill of the physician shall lift up his head; and in the sight of great men he shall be in admiration."—ECCLESIASTICUS OF THE APOCRYPHA, Chap. XXXVIII.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION: Seventy-Second Annual Session and Thirty-Sixth Annual Session of the House of Delegates, Gulfport, May 9, 10, 11, 1939.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday, each month, Natchez, 7:30 p. m.

Amite County Medical Society: W. S. Stewart, Oskya, president; D. H. Thornhill, Crosby, secretary. Meets second Thursday, each month with Wilkinson County Medical Society, Field Memorial Hospital, Centreville.

Central Medical Society: J. T. Rainer, Yazoo City, president; Lawrence W. Long, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. D. House, Sledge, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: William P. Warfield, Clarksdale, president; N. C. Knight Clarksdale, secretary. Meets second Wednesday each month, Alcazar Hotel, Clarksdale, 12 noon.

Coast Counties Medical Society: W. W. Lake, Pass Christian, president; D. L. Hollis, Biloxi, secretary. Meets first Wednesday, each month at night.

Delta Medical Society: C. W. Patterson, Rosedale, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

Desoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4, Memphis, secretary. Meets first Monday of January, April, June, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Harrison, Philadelphia, president; Bob A. Cameron, Meridian, secretary.

Franklin County Medical Society: C. A. Everett, Bude, president; L. Costley, Meadville, secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: B. B. Martin, Jr., Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Mississippi State Charity Hospital, Vicksburg, 7 p. m.

Marshall County Medical Society: C. R. Senter, Byhalia, president, Herbert Phillips, Holly Springs, secretary. Meets second Thursday each month, alternating between Byhalia and Holly Springs.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary.

North Mississippi Medical Society: R. M. Adams, Ripley, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen-County Medical Society: Dr. R. J. Brown, Iuka, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September, December.

Pike County Medical Society: E. M. Givens, McComb, president; T. Paul Haney, Jr., McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Sunflower County Medical Society: U. S. Wasson, Moorhead, president; H. B. Cottrell, Indianola, secretary.

Tallahatchie County Medical Society: G. Lacy Biles, Sumner, president; G. D. Hightower, Webb, vice president; J. E. Powell, Charleston, secretary.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: R. B. Zeller, Hazlehurst, president; J. C. McGuire, Hazlehurst, secretary. Meets June 14, Walthal Hotel, Tylertown; September 13, Riverside Hotel, Monticello; December 13, Whitworth College, Brookhaven, 12:30 p. m.

Webster County Medical Society: E. F. Arnold, Bellefontaine, president H. K. Curry, Eupora, secretary.

Wilkinson County Medical Society: C. E. Catchings, Woodville, president; E. M. Butler, Centreville, secretary. Meets second Thursday, each month, with Amite County Medical Society, Centreville.

Winona District Medical Society: T. J. Brown, Grenada, president; S. B. Caruthers, Grenada, secretary.

MISSISSIPPI STATE HOSPITAL ASSOCIATION

COMMITTEES—1938-1939

Standing Committees

Constitution and Rules.—J. Rice Williams, M.D., Houston Hospital, Houston, Chairman; W. H. Frizell, M.D., King's Daughters Hospital, Brookhaven, Vice-Chairman; T. M. Dye, M.D., Clarksdale.

Legislation.—V. B. Philpot, M.D., Houston Hospital, Houston, Chairman; L. W. Long, M.D., Jackson, Vice-Chairman; W. Jeff Anderson, M.D., Anderson Infirmary, Meridian; E. S. Bramlett, M.D., Bramlett Hospital, Oxford; R. B. Caldwell, M.D., Baldwyn Hospital, Baldwyn; W. W. Diamond, M.D., Magee General Hospital, Magee; J. W. D. Dicks, M.D., Natchez Sanatorium, Natchez; S. E. Eason, M.D., New Albany Hospital, New Albany; R. J. Field, M.D., Field Memorial Hospital, Centreville; Charles LeBaron, M.D., Gulfport; M. H. McRae, M.D., McRae Hospital, Corinth; V. B. Martin, M.D., Martin Sanatorium, Picayune; E. R. Nobles, M.D., Rosedale; Robert W. Smith, M.D., King's Daughters Hospital, Canton; C. F. Theobold, Biloxi Hospital, Biloxi; E. LeRoy Wilkins, M.D., Clarksdale; H. A. Gamble, M.D., Greenville.

Membership.—W. H. Brandon, M.D., Clarksdale, Chairman; G. E. Adkins, M.D., Jackson Infirmary, Jackson, Vice-Chairman; E. C. Parker, M.D., Gulfport.

SPECIAL COMMITTEES

Charity Hospitals.—E. H. Jones, M.D., Vicksburg, Chairman; G. Lamar Arrington, M.D., Meridian, Vice-Chairman; Louis M. Magee, M.D., Natchez Charity Hospital, Natchez; Thomas A. Rhoden, Columbia.

Mental Hospitals.—C. D. Mitchell, M.D., Mississippi State Hospital, Whitfield, Chairman; J. S. Hickamn, M.D., Mississippi State Hospital, Meridian, Vice-Chairman; R. L. Rhymes, M.D., Meridian.

Public and Community Relations. — Henry Boswell, M.D., Sanatorium, Chairman; Felix J. Underwood, M.D., Jackson, Vice-Chairman; R. M. Flynt, M.D., Newton Infirmary, Newton; H. N. Mayes, M.D., Mayes Hospital, New Albany; B. B. Martin, Vicksburg Infirmary, Vicksburg.

Minimum Standards.—John C. Culley, M.D., Oxford Hospital, Oxford, Chairman; W. W. Crawford, M.D., South Mississippi Infirmary, Hattiesburg, Vice-Chairman; Mrs. Karenza Gilfoy, Mississippi Baptist Hospital, Jackson; A. B. Harvey, M.D., Tylertown Hospital, Tylertown; J. W. Primrose, M.D., Clarksdale; Mary H. Trigg, R.N., Greenwood Leflore Hospital, Greenwood.

Nurses and Nursing.—Mrs. Sam Owens, R.N., George C. Hixon Memorial Hospital, Electric Mills, Chairman; Mary E. Dorsey, R.N., King's Daughters Hospital, Greenville, Vice-Chairman; S. E. Field, M.D., Field Memorial Hospital, Centreville; H. Ogden, Methodist Hospital, Hattiesburg; W. C. Pool, M.D., Cary.

Publication.—Leon S. Lippincott, M.D., Vicksburg Sanitarium, Vicksburg, Chairman; A. M. McCarthy, M.D., George C. Hixon Memorial Hospital, Electric Mills, Vice-Chairman; J. M. Acker, Jr., Aberdeen Hospital, Aberdeen.

Hospital Taxation.—B. B. Martin, Jr., M.D., Vicksburg Infirmary, Vicksburg, Chairman; C. H. Harrison, M.D., Philadelphia Hospital, Philadelphia, Vice-Chairman; J. R. Hill, M.D., Corinth; William P. Warfield, M.D., Clarksdale; Thomas Wolford, M.D., Columbus Hospital, Columbus.

National Hospital Day.—F. B. Long, M.D., Oktibbeha Hospital, Starkville, Chairman; Mrs. Leon S. Lippincott, Charity Hospital Aid Association, Vicksburg, Vice-Chairman; I. P. Carr, M.D., Clarksdale; F. S. Hill, M.D., Grenada General Hospital, Grenada; F. P. Ivy, M.D., Ivy Hospital, West Point; Everett H. Crawford, M.D., Walthall Hospital, Tylertown;

R. B. Yates, M.D., Victoria Butler Colored Hospital, Greenwood.

Hospital Records.— W. H. Parsons, M.D., Vicksburg Hospital, Vicksburg, Chairman; P. L. Fite, M.D., Fite Hospital, Columbus, Vice-Chairman; J. E. Powell, M.D., Charleston; Julia Stout, R.N., Rosedale Bolivar County Hospital, Rosedale; W. H. Sutherland, M.D., Northeast Mississippi Hospital, Booneville.

Hospital Accounting.—G. D. Stanley, King's Daughters Hospital Greenville, Chairman; Mrs. J. Oridge, R.N., Holmes County Community Hospital, Vice-Chairman; W. W. Hall, Jr., M.D., Shelby; G. G. Townsend, M.D., Scott County Hospital, Morton.

Hospital Staff Rules and Regulations.—Helen Branham, R.N., North Mississippi Community Hospital, Tupelo, Chairman; J. P. Wall, M.D., Jackson, Vice-Chairman; J. L. Levy, M.D., Clarksdale; L. B. McCarty, M.D., Jackson; L. B. Morris, M.D., Macon Hospital, Macon.

Approved Merchandising (Southern Hospital).—J. K. Avent, M.D., Grenada General Hospital, Grenada, Chairman; L. W. Brock, M.D., McComb Infirmary, McComb, Vice-Chairman; Ashton Toomer, Houston; B. T. Whitfield, Corinth Hospital, Corinth.

Child Health Day.—W. H. Anderson, Booneville, Chairman; Gladys Ratcliff, M.D., Mccomb City Hospital, McComb, Vice-Chairman; T. G. Hughes, M.D., Clarksdale; D. B. Stevenson, M.D., City Hospital, Lumberton; W. B. Rankin, R.N., Columbia.

Extension (Under direction of Committee on Membership):

Adams, Amite, Franklin, Jefferson and Wilkinson Counties—Charles Evans Catchings, M. D., Woodville.

Hinds, Leake, Madison, Rankin, Simpson, Scott and Yazoo Counties—Noel C. Womack, M.D., Jackson Infirmary, Jackson.

Claiborne, Issaquena, Sharkey and Warren Counties—I. C. Knox, M.D., Vicksburg Hospital, Vicksburg.

Clarke, Lauderdale, Neshoba, Newton, Winston Counties—C. J. Lewis, M.D., Lewis Hospital, Meridian.

Coahoma, Quitman, Tallahatchie Hospital, Charleston.

Humphreys and Leflore Counties.—R. B. Yates, M.D., Victoria Butler Colored Hospital, Greenwood.

Bolivar and Sunflower Counties—L. B. Austin, M.D., Rosedale.

Washington County — C. C. Whittington, King's Daughters Hospital, Greenville, Greenwood.

Hancock, Harrison, Jackson and Stone Counties—D. G. Raffetry, Pass Christian.

Benton, DeSoto, Lafayette, Marshall, Panola, Tate, Tippah, Union, and Yalobusha Counties—George A. Brown, M.D., Water Valley Hospital, Water Valley.

Copiah, Lawrence, Lincoln, Pike and Walthall Counties—Lucille Mullen Lovett, R.N., King's Daughters Hospital, Brookhaven.

Covington, Jasper, Jefferson Davis, Jones, Smith and Wayne Counties—Maud E. Varnado, R.N., Laurel General Hospital, Laurel.

Alcorn, Itawamba, Lee, Pontotoc, Prentiss and Tishomingo Counties—T. H. Rayburn, M.D., Pontotoc Clinic, Pontotoc.

Calhoun, Chickasaw, Clay, Lowndes, Monroe, Noxubee and Oktibbeha Counties.—M. Q. Ewing, M.D., Gilmore Sanitarium, Amory.

Attala, Carroll, Choctaw, Grenada, Holmes, Montgomery and Webster Counties—E. W. Holmes, M.D., Winona Infirmary, Winona.

Forrest, Green, Lamar, Marion, Pearl River and Perry Counties—T. E. Ross, M.D., Methodist Hospital, Hattiesburg.

BOARD OF DIRECTORS

COMMITTEE ASSIGNMENTS

Committees will work under the direction of and be responsible to the members of the Board of Directors as follows:

Dr. Gilruth Darrington: Constitution and Rules, Mental Hospitals, Public and Community Relations, National Hospital Day, Hospital Staff Rules and Regulations.

Dr. Leon S. Lippincott: Publication, Membership, Extension, Approved Merchandising.

Dr. J. Gould Gardner: Legislation, Minimum Standards, Hospital Taxation, Hospital Accounting.

Dr. A. Street: Charity Hospitals, Nurses and Nursing, Hospital Records, Child Health Day.

The story is told that when Abraham Lincoln was conferring with the committee over a speech the president was to make, he said: "If I am to talk forty-five minutes I will not need any time for preparation, if I am to speak only ten minutes, I would like a week to get my remarks ready."

MORE THAN TWO FOR ONE BUDGET AND EXPENDITURES FOR EXTENSION TEACHING IN MISSISSIPPI

June 1, 1937 to May 31, 1938

Appropriations and Collectionss		
Mississippi:		
State Medical Association	$1,500.00	
State Board of Health	1,000.00	
Fees	1,033.10	
TOTAL		$3,533.10
Disbursements:		
Organizer:		
Salary,	$1,350.00	
Expenses	965.78	

Total			$2,315.78
Miscellaneous expenditures in connection with courses given in Mississippi			675.84
Extra-Mural Instruction:			
	Salaries	Expenses	
Pediatrics	$2,677.50	$776.22	$3,453.78
Syphilology,	1,500.00	481.74	1,981.74
	$4,177.50	$1258.02	$5,435.52
Special meetings in Mississippi subsided by Division of Medical Extension			$72.57
TOTAL			$8,499.71
Total amount contributions by Mississippi agencies (including fees paid by physicians attending classes)			$3,533.10
Total amount contributed by the Division of Medical Extension			$4,966.61

WHAT WE NEED

We do not need more material development; we need more spiritual development.

We do not need more intellectual power; we need more moral power.

We do not need more knowledge; we need more character.

We do not need more government; we need more culture.

We do not need more laws; we need more religion.

We do not need more of the things that are seen; we need more of the things that are unseen.

—Calvin Coolidge.

MISSISSIPPI STATE BOARD OF HEALTH

Lobar pneumonia is a dangerous disease and last year ranked high as a cause of death in Mississippi. In the period 1935-1937, 3,328 deaths resulted from this disease in the state. In addition to these deaths, 2,622 people died of influenza with respiratory complications, meaning in most instances, lobar pneumonia, resulting from secondary infection with pneumococcus.

Realizing the urgent need for a better understanding of this condition by the public, the State Board of Health is conducting this fall an educational campaign relative to pneumonia.

Through the talking film, "A New Day," literature, and study clubs, an effort will be made to stress upon the public mind the following facts:

1. Lobar pneumonia is a contagious disease through direct contact with cases and carriers.
2. Early medical and nursing care is of paramount importance.
3. Specific type serum treatment reduces deaths by one-half in several types of pneumonia.

The film will be shown in practically all theaters in the state through co-operation of theater owners and managers. It is expected that questions and discussions will arise as a result of this campaign, and the co-operation of physicians in this program of education regarding pneumonia is requested.

A two days' health officers' conference on syphilis treatment and control was held August 8-9 at the Robert E. Lee Hotel in Jackson, attended by full-time health officers and the staff of the State Board of Health.

The conference was designed to promote the organization and smooth-running of the syphilis program authorized and provided for by the last regular session of the legislature by the federal government.

The program of the health officers was as follows:

Monday, August 8:

1. Plans and Policies of the State Board of Health in Syphilis Control.—Dr. Felix J. Underwood.

2. The Syphilis Problem in Mississippi.—Dr. D. V. Galloway.

3. The Epidemiology of Syphilis.—Dr. A. L. Gray.

(Discussion)

4. The Laboratory in Syphilis.—Dr. H. C. Ricks.

5. Cost Accounting in Venereal Disease Control.—Dr. A. J. Milne.

6. Records and Record-Keeping in Syphilis Control.—Dr. A. R. Perry.

7. Demonstration Clinic—Dr. W. E. Noblin.

Tuesday, August 9:

1. Teaching Syphilis.—Dr. A. Hedmeg.

2. Diagnosing and Classification of Syphilis.—Dr. Martin T. Van Studdiford.

3. Treatment of Syphilis.—Dr. Martin T. Van Studdiford.

(Discussion)

4. Clinic Equipment.—Dr. C. R. Gillespie.

5. Clinic Routine.—Dr. R. H. DeJarnette.

6. Prenatal and Congenital Syphilis.—Dr. Martin T. Van Studdiford.

In opening the program, Dr. Felix J. Underwood, Executive Officer of the State Board of Health, outlined the plans and policies of this organization in regard to syphilis control.

"Syphilis is a public health problem of enormous proportions because of its wide prevalence, its serious nature, and its costly treatment, which, in a majority of cases cannot be dealt with adequately by the individual efforts of the patients," Doctor Underwood stated.

"It is the obligation of public health forces to meet the responsibility placed on them by congress and the legislature in controlling this disease. The best health officer is the one who receives the co-operation of his physicians in this program, of his supervisors who make possible the necessary funds, and of the public—the people who participate in the clinics and for whom treatment is needed."

Effective July 1, a new Venereal Disease Control Division was set up by the State Board of Health, and Dr. D. V. Galloway, Director of the Lauderdale County Health Department, was named supervisor of this program.

Dr. John H. Hines of Atlanta, Georgia, has been named assistant director of the Lauderdale County Health Department, effective September 1. Doctor Hines is a graduate of Emory University, Atlanta, finishing there in 1937. He interned at Grady Memorial and St. Joseph Hospitals in Atlanta, and was physician for several months at CCC camps in Georgia.

On August 3, Dr. Felix J. Underwood discussed "The Epidemiology of Tuberculosis" before the Coast Counties Medical Society meeting at the Kings' Daughters Hospital, Gulfport.

Dr. Frederic Mila de la Roca, Venezuela, is taking a several months' course of training at the State Hygienic Laboratory, following which he will return to his country as a laboratory worker. Prior to his arrival in Mississippi, Doctor de la Roca spent three weeks in New York City laboratories with Doctor Sutcliffe and others.

On August 23, Dr. John B. Floyd, Director, Bureau of Tuberculosis Control, Kentucky State Board of Health, visited the State Board of Health and State Sanatorium.

On August 25, Doctor Underwood discussed "Trends in Public Health," before the Rotary Club of Tunica.

On August 27, Dr. W. K. Sharp, Jr., Regional Consultant, United States Public Health Service, New Orleans, Louisiana, visited the State Board of Health, where he conferred with Doctor Underwood and Doctor Milne. On the same date, Dr. J. R. Heller, Jr., Regional Venereal Disease Consultant, District 4, U. S. Public Health Service, conferred with Doctor Underwood, Doctor Gray, and Doctor Galloway with regard to the venereal disease program in the state.

Other visitors to the State Board of Health during August included Dr. L. L. Lumsden of the U. S. Public Health Service in New Orleans, Louisiana, and Dr. W. Palmer Dearing of the U. S. Public Health Service in Montgomery, Alabama.

Scholarships in public health were awarded to a number of health workers in Mississippi this fall. Dr. R. J. Jones, Director of the Pearl River County Health Department, will study at Johns Hopkins University, Baltimore, for eight months. Miss Margaret Meade, epidemiological nurse investigator for the State Board of Health, goes to Columbia University for an eight-month period. D. D. Myers, sanitary engineer in Warren County, is taking an eight months' post-graduate course at Harvard, while I. S. Bass, sanitary supervisor of Tallahatchie County, and Fred J. Dickinson, sanitation supervisor of Jones County will study three months at Vanderbilt University School of Engineering.

Miss Annie Mae Wall and Miss Ilda Hudnall, public health for Lee and Tallahatchie Counties, will have four-month courses of instruction at Columbia University, and Miss Irene Boone, public health nurse in Copiah County, will study at Peabody College for four months.

Miss Opal Regan, advisory field nurse for the State Board of Health will have a month's travel scholarship to Detroit and the State of Tennessee for the observation of nursing procedures.

Staff conferences of the Board of Health during the month of August were held the first and third Saturdays by Dr. J. A. Milne, Director of County Health Work, and Dr. A. L. Gray, Director of Preventable Disease Control.

The conclusion is near at hand of special maternity conferences in all full-time county health departments of the at which Dr. Maxwell Lapham, Director of Medical Extension at Tulane University, New Orleans, has given advice and suggestions to health officers. Two days each week are devoted to these conferences by Doctor Maxwell and Dr. H. B. Cottrell, Supervisor of Field Unit, State Board of Health, who arranged them.

"These conferences are designed to raise the quality and quantity of maternal education," Doctor Cottrell stated.

Dr. Felix J. Underwood has been named chairman of public health and welfare day of the Mississippi State Fair, which will be held October 12.

The day will be featured by a parade of floats representing health and welfare agencies and by the showing of health films on the Fair grounds.

The State Board of Health will conduct an exhibit on syphilis.

The radio program of the State Board of Health, held each Saturday morning from 9:30

to 9:45, featured the following speakers during August:

August 6—Dr. Felix J. Underwood, Executive Officer—"Conserving Sight and Hearing."

August 13—Dr. H. B. Cottrell, Supervisor, Field Unit.—"Saving Our Mothers."

August 20—Mr. J. S. Vandiver, Superintendent of Education—"Health Problems of the School Child."

August 27—Dr. Felix J. Underwood, Executive Officer—"Medicine Marches On."

CENTRAL MEDICAL SOCIETY

The first meeting of the Central Medical Society for the fall months was held Tuesday, September 6, at the Robert E. Lee Hotel Roof, with dinner at 6:30 p. m.

The program as announced by the secretary, Dr. Lawrence W. Long, was as follows:

1. The program of the Mississippi Social Hygiene Association.—Dr. D. V. Galloway, State Supervisor of Venereal Disease Control, Meridian.

Discussion opened by Dr. Felix J. Underwood, Jackson, and Dr. W. E. Noblin, Jackson.

2. Fundamentals of Water Balance. — Dr. Temple Ainsworth, Jackson.

Discussion opened by Dr. F. L. Van Alstine, Jackson, and Dr. Ben Walker, Jackson.

3. Some Problems Encountered in the Treatment of Fractures.—(Lantern Slides). — Dr. Earle N. Conwell, Birmingham, Alabama.

DELTA MEDICAL SOCIETY PROGRAM TO BE PRESENTED AT INDIANOLA, MISSISSIPPI, OCT. 12, 1938

"Elliot Treatment of the Pelvis"—S. L. Lane, M.D., Hollandale.

"Atebrine in Malaria"—B. H. Booth, M.D., Drew.

"Skin Diseases Commonly Encountered in Infancy and Childhood"—R. E. Wilson, M.D., Greenwood.

"Perforated Peptic Ulcer"—W. W. Hall, M.D., Shelby.

"Some Unusual Tumors of the Ovary"—Randolph T. Smith, M.D., Little Rock, Arkansas, guest essayist.

Greenville, F. M. Acree,
Sept. 14, 1938. Secretary.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Vicksburg, Tuesday, September 13, and after a supper served at 7:00 p. m., was called to order by the president, Dr. B. B. Martin, Jr., with twenty-nine members and eight guests present.

Papers and Discussions.—Surgical Diseases of the Gastrointestinal Tract.—Dr. P. S. Herring, Chairman.

1. Carcinoma of the Stomach.—Dr. W. H. Parsons. Discussed by Drs. L. L. Long, G. M. Street, W. K. Purks, L. J. Clark, and P. S. Herring. Dr. Parsons closed.

2. Carcinoma of the Colon and Rectum.—Dr. A. Street. Discussed by Drs. G. W. Gaines, P. S. Herring and W. K. Purks. Dr. Street closed.

Dr. J. P. Wall, Jackson, President-Elect, and Dr. Lawrence W. Long, Jackson, Councilor, Mississippi State Medical Association, made official visits and both spoke on organized medicine in Mississippi and the responsibilities of the component societies. Their messages were received with much interest.

Resolutions on the death of Dr. John Alexander Kline Birchett was presented by Drs. S. W. Johnston and F. Michael Smith, and unanimously adopted.

The radio programs to be presented weekly by the society during the next quarter of the year were outlined and a schedule adopted as follows:

October 5—Gallstone Colic, Dr. G. P. Sanderson.

October 12—Anesthesia, the Escape From Pain, Its Use and Abuse, Dr. A. Street.

October 19—How do We Catch Communicable Diseases?, Dr. F. Michael Smith.

October 28—Storks Have Big Bills, Dr. Geo. M. Street.

November 2—The Low Down on High Fever, Dr. W. A. Smith.

November 9—"A Child Is To Be Born," Dr. R. A. Street, Jr.

November 16—Burns and Scalds, Dr. W. H. Scudder.

November 23—Shock—What Can Be Done?, Dr. J. A. K. Birchett, Jr.

November 30—Sore Eyes, Dr. Alston Callahan.

December 7—Spitting Up Blood, Dr. L. J. Clark.

December 14—What Is A Congestive Chill and Do We Have Them?, Dr. G. W. Gaines.

December 21—Tetanus—Lockjaw, Dr. John R. Dent.

December 28—Foreign Bodies In The Respiratory Tract, Dr. C. J. Edwards.

Dr. Edley H. Jones presented a report of the clinic conducted by the society for the month of August. It showed that 842 persons made a total number of clinic visits of 1681 or a daily average of 64. Distribution by services was as follows: medical, 200; surgery, 210;

obstetrics, 60; gynecology, 105; eye, ear, nose and throat, 100; orthopedics, 25; pediatrics, 40; genitourinary, venereal, 651; genitourinary, non-venereal, 65. Patients came to the clinic from seventeen counties of the state and from four other states.

The members authorized to act for the society reported that incorporation had been effected.

The next meeting of the society will be held Tuesday, October 11, at 7:00 p. m. A program devoted to Diseases of Nutrition, will be in charge of Drs. H. B. Goodman, Anguilla; G. W. Gaines, Tallulah; H. H. Johnston, Vicksburg; and W. H. Scudder, Mayersville.

ADAMS COUNTY

Your Alaskan appeal was received while I was suffering the ravages of 'flu.' I believe you wish a few notes on what is happening to us down here in Adams County. Perhaps I am too late for publication, but in order that our other Mississippi friends may know that we are still alive, I am handing you the following which you may use according to your discretions.

Dr. and Mrs. W. K. Stowers and family have returned home following an extended visit to the Gulf Coast.

Earlier in the past month Dr. Louis Magee and his wife and daughter spent a few weeks in Colorado and New Mexico.

Dr. George Dicks who has been doing his intern work at Union Memorial Hospital, Baltimore, since his graduation from Vanderbilt 1936, is now in practice with his father, Dr. J. W. D. Dicks.

The Adams County Medical Society had as its guest essayists for the August meeting Dr. W. T. Harper, Fayette, and Dr. David Thornhill, Crosby. Their excellent papers were well received.

Natchez, F. S. Dixon,
Sept. 5, 1938.

DESOTO COUNTY

The Physician's Responsibility. Section I.—A profession has for its prime object the service it can render to humanity; reward or financial gain should be a subordinate consideration. The practice of medicine is a profession. In choosing this profession an individual assumes an obligation to conduct himself in accord with its ideals.—PRINCIPALS OF MEDICAL ETHICS, Chapter I.

In a recent issue of "Life," there were pictures of foreign bodies removed by bronchoscopist, Dr. Chevalier Jackson, of Philadelphia, who has retired from active work in his profession but devotes much time to his hobbies. He has also his biography, "The Life of Chevalier Jackson." Dr. Jackson is known from coast to coast and beyond and no doubt his book will be interesting and instructive reading.

Among the younger physicians of Memphis who count this state as their native home is Dr. James D. Biles, Jr. Dr. Biles' father and brother live at Sumner. Dr. Biles, Sr., has practiced his profession here for many years. All three of these gentlemen are active and successful in their work.

Dr. James B. McElroy was born in that fine old typical Southern city, Columbus, practiced with much success at Friars Point; some thirty odd years ago he moved to Memphis where he continues to practice to an increasingly large clientele. He has been connected with the medical schools and for some years has been professor of the principles and practice of medicine. He is a physician of the highest merit, a true and tried gentleman and a teacher of mark worth. His son, Dr. J. W. McElroy, is associated with him.

Another native of this state who has a son associated with him and a source of inspiration to him is Dr. Oswald Stuart McCown. The younger McCown has his father's full name. The senior McCown has been in Memphis about 40 years and his success has been marked. Dr. C. B. McCown, Aberdeen, is a brother.

Dr. and Mrs. Clarence D. Prichard and baby of Lambert were recent visitors in the home of Mrs. Prichard's mother, Mrs. Chas. G. Taylor, Walls.

We noticed in yesterday's Memphis hospital list the name of Mr. Allan Dye, son of Dr. T. M. Dye, of Clarksdale. We trust that his malady is of a minor nature.

We hope to be able to have in hand soon the autiobiography of other members of our local medical society; please send them to me. Thanks.

Dr. W. D. Casey, Walls, is rejoicing over the arrival of his second grandchild, a son born to Mr. and Mrs. Whitley Casey of Memphis, Tenn., in August.

. . . . Diseases desperate grown by desperate appliances are relieved or not at all.—SHAKESPEARE.

Route 4, Memphis, L. L. Minor,
Sept. 9, 1938. County Editor.

LEFLORE COUNTY

Dr. and Mrs. C. J. Pittman and family, Ruleville, and Mr. and Mrs. W. M. Lloyd and children, Greenwood, left for a trip to Daytona Beach, and Tampa, Fla., August 1.

Dr. and Mrs. C. E. Walker and son were guests in the home of Mr. and Mrs. L. Upshur

August 5. Miss Nell Upshur accompanied them to Sanatorium for a short visit.

Dr. G. Y. Gillespie, Jr., attended the family reunion at Duck Hill August 7. The occasion was the celebration of his father's 83rd birthday.

Dr. and Mrs. Tate Carl of Memphis spent a week here in the home of Mr. A. S. Carl, on their way to Jackson where the doctor will locate for the practice of general medicine.

Dr. R. B. Yates, Dr. and Mrs. L. A. Barnett, Dr. F. M. Sandifer, Jr., Dr. G. Y. Gillespie, Jr., spent the week of August 15 on the Mississippi Coast.

Dr. and Mrs. R. P. Bell and daughters, Mary and Janet, Staunton, Va., visited in the home of Mrs. C. G. Hull, Jr., the doctor's daughter, a few days in August.

Dr. and Mrs. J. A. Crawford and children, Philadelphia, spent the week-end of August 27 in Greenwood, to attend the wedding of Dr. Crawford's brother, Mr. Lamar Crawford, to Miss Myrtis Williamson, operating room nurse of the Greenwood Leflore Hospital, at the nurses' home, August 27.

Dr. T. R. Montgomery, Memphis, was a recent visitor to Greenwood.

Dr. Tom Wesson, nephew of Dr. R. E. Wilson of this city, formerly of Guntown, who graduated at Duke University, and served his internship in New York, stopped off in Greenwood to see the doctor and family a few days, on his way to do postgraduate work in St. Louis at the Barnes Hospital.

Miss Katie Lou Hightower, daughter of Dr. and Mrs. L. H. Hightower, Itta Bena, were married August 25 at Itta Bena to Dr. Francis Garvin Davenport, Lexington, Ky., head of the history department of Transylvania College.

Dr. B. B. Harper, Itta Bena, will leave September 1 for Vanderbilt University to take a month's postgraduate work in venereal diseases by grant of the commonwealth fund. Mrs. Harper will accompany the doctor.

Greenwood, W. B. Dickins,
September 1, 1938. County Editor.

INTERPRETING MEDICAL LITERATURE
PEDIATRICS

Harvey F. Garrison, Jackson

Anemia in infancy is an ever present worry to the pediatrician, as well as to the general practitioner. An abstract of the following article on the comparison of the efficacy of ferric and ferrous iron is quite interesting and timely.

Hypochromic Anemia of Infants. Comparison of the Efficacy of Ferric and Ferrous Iron. —By Ruth Stephenson (Am. J. Dis. Child) 55:1141 (June) 1938.—"Since other investigators have shown that infants between three months and two years of age have average hemoglobin values appreciably lower than those of adolescents or adults, and since such hypochromia is chiefly consequent on iron deficiency, this study was designed to learn, (1) whether all healthy infants of this age range who live under good conditions exhibit the reported hypochromia; (2) how far adequate iron therapy raises their hemoglobin level; (3) the comparative efficacy of varying doses of ferric and ferrous forms of iron; and (4) for what lengths of time a maintenance dose of supplemental iron is indicated."

"A study was made of 64 normal white American-born boys and girls ranging from three months to two years in age, and living under the same conditions in an institution having good pediatric supervision."

"There being no other known variable, half of the infants were each given 30 grains of iron and ammonium citrate (about 340 mg. of metallic iron) daily; the control infants were each given 6 grains of ferrous sulfate (about 78 mg. of metallic iron) daily. Therapy was continued for three months, the effects being checked by estimations of red cell count, hemoglobin and red cell volume."

"As indicated by increase in hemoglobin, the ferrous iron proved to be as effective as the ferric." It was found that 14 gm. of hemoglobin per hundred cubic centimeters of blood is the optimal level to be expected from administration of these forms and doses of iron, continued for three months, for infants of this age period.

"The two groups having reached much the same average hemoglobin level at the end of three months, one group was then withdrawn from iron therapy while the other group continued to receive supplemental iron for an additional three months. The trend of the hemoglobin level was downward in those infants whose medication was discontinued, whereas it was upward in those for whom medication was maintained.

"It seems probable that the increases in hemoglobin were the results of generous supplements of iron alone rather than of the traces of copper which contaminated both iron compounds.

"This study confirms the claim that seemingly normal babies between the ages of three months and two years have a border line anemia and demonstrates that their hemoglobin levels can be raised to about 14 gm. per hundred cubic centimeters by treatment with adequate iron without added copper. Increases in the number and volume of red cells, also result though they are less marked. Improvements in the infants' color, activity and resistance to infection are believed to result, though they are difficult to measure. In this investigation ferrous iron produced a maximum effect with much smaller doses than ferric, and it caused no gastro-intestinal disturbance. Some supplemental iron appears to be needed, up to the age of two years at least, to maintain the hemoglobin at this optimal level; it is possible that less than 6 grains of ferrous sulfate would be an adequate maintenance dose."

RADIOLOGY

J. A. Beals, Greenville

Results of Radiation Therapy for Carcinoma of the Uterus.—Carcinoma of the uterine cervix is almost exclusively a radiological problem, and carcinoma of the fundus is largely so. G. G. Gray and N. B. Sackett (J.A.M.A., Jan. 29, 1938) of the Woman's Hospital, New York, issue the latest of a series of reports from that hospital, giving their five- and ten-year survivals between 1919 and 1932.

This hospital reports 27.4 per cent five-year survivals for all patients seen, numbering 595. Of this number 121 were classified as early, and these show a 5-year survival of 56.2 per cent. The ten-year survival rate is 17.2 per cent, or stated differently, if a woman survives for five years she has a 73 per cent chance of surviving 10 years. These are gross survival rates; all who died from any cause are counted as not having survived their cancer disease.

The authors remark that the cases treated in the latter part of this period, 1919-1932, show a much higher rate, 35 to 40 per cent for 5 years, than shown in the earlier years. This improvement they ascribe partly to the addition of roentgen therapy since 1930 and partly to adequate radium therapy. Since 1933 they are employing roentgen therapy by the Coutard technique. This is usually preceded by applications of radium within the uterus, by platinum filtered needles inserted into the cervix, and by applications of radium within the vaginal fornices, the total irradiation dosage being large.

These authors attempt to evaluate the effects of high voltage roentgen therapy given in massive dosage as an adjunct to radium therapy but have only 53 cases for comparison on a 3-year survival basis. For these the survival is only a little better than when radium alone was used. However, the authors call attention to the fact that only six of these were treated by the Coutard method, which introduces nearly 2½ times as much radiation as former roentgen methods. They make a plea for the accumulation of statistics on a 5-year basis rather than clinical impressions.

The authors have been impressed by the high incidence of carcinoma of the cervical stump encountered after hysterectomy, and for this reason recommend that pan-hysterectomy be performed whenever possible if no added risk is involved.

Their five-year survival rate for 108 cases of carcinoma of the fundus was 42.6 per cent. They recommend that pan-hysterectomy be done whenever possible and feel that this operation can often be preceded, with advantage, by radiation therapy.

A recent article on this subject by A. N. Arneson (Radiology, Feb. 1938) of Washington University, St. Louis, is technical in character, not statistical, but emphasized the need for individualization of the methods used in the radiation treatment of cancer of the cervix. In this and previous articles Arneson has shown that it is possible, although tedious, to calculate the radiation dosage introduced into any part of the volume of the pelvis by combinations of external roentgen therapy and radium applied in the several forms of capsules, needles and vaginal packs that are, or should be, available to those attempting this treatment.

There is a minimum radiation of six to eight threshold erythema doses that must reach every part of the pelvis to which the primary cancer may have spread; less than this minimum will allow recurrencies to take place. Arneson shows that a more even distribution, and a wider distribution of this minimum dose, can be introduced throughout the pelvis, by planning the treatment in advance, taking advantage of all the various kinds of applicators and needles, than can be hoped for by any more or less standardized method.

To do this, he believes, is the only hope of materially improving the rate of cure.

Less recently (Amer. J. Obst. & Gynec. Oct. 1937), W. P. Healy and W. P. Frizell, of the Memorial Hospital, New York, report their five-year results for radiation treatment of primary carcinoma of the cervix for the period 1928-1931, a total of 551 cases treated. They condemn the practice of reporting gross survival rates (as reviewed above from the Woman's Hospital, New York) maintaining that the value of the treatment can be judged only from the cases treated. However, their gross survivals are 22 per cent of 700 cases seen (as compared to a much higher figure for recent years, but a much smaller series, from the Woman's Hospital). The five-year results and the treated cases of Healy and Frizell are given at 27.7 per cent; early cases 58 per cent, advanced cases 22 per cent.

Throughout this series the treatment has generally started with massive x-ray treatment, followed by radium in large doses applied against the cervix, within the cervical canal and by radium needles into the cervix; finally another course of x-ray treatment has been given four months later. Since 1933 (cases not included in this report) they have used the divided dose (Coutard) method for x-radiation, so that their next report will be of special interest in evaluating this method. These authors express their dissatisfaction with their own results and those of others, and like Arneson firmly believe that results can be improved by effecting a wider distribution of radiation throughout the parametrial tissues.

One of the most interesting parts of this article is the consideration of complications due to heavy radiation treatment. Early complications are usually mild and consist of radiation proctitis and cystitis. Among late complications occurring in this series of 551 cases they list pyometria, occurring in at least 17 cases, requiring long drainage or hysterectomy; rectal stricture occurring in nine cases, severe enough to require operation in three; rectovaginal or vesicovaginal fistula occurred 29 times; and pelvic peritonitis a few times. By its omission they evidently do not consider obstruction of the ureters, a fairly common occurrence in cases not cured, as a complication of radiation treatment.

OPHTHALMOLOGY AND OTOLARYNGOLOGY

Alston Callahan, Vicksburg

Possibilities of Stereoscopic Motion Pictures.—George W. Wheelwright: J. Photographic Sec. America.—Like many other "new" discoveries and inventions, stereoscopy dates back to many centuries ago. Leonardo da Vinci indicated that he understood the principle of two-eye pictures, and the geometrical difference between what one eye saw and what the other eye saw. Wheatstone made an excellent analysis of this subject, and achieved it with the use of mirrors and two pictures so that each eye saw only its own picture; and a few years later, in 1840, Sir David Brewster devised parts of two lenses to make the familiar device known as the stereoscope. Due to various improvements made upon this apparatus, by the efforts of Oliver Wendell Holmes and others, stereoscopes enjoyed an enormous popularity. Almost every home had one with views of Niagara Falls and mountain scenes. Among the many reasons for the subsequent loss of interest, two are predominant: looking thru it was an unsocial act, in which the viewer shut himself off from the outside world, and therefore the pictures could not be enjoyed together; and secondly, non-observance of the proper technic in making the pictures, so that only a poor degree of stereopsis resulted.

One of the essential requirements of true stereoscopy is that each eye must see its own picture, and only its own picture. No attempt at stereoscopy can succeed unless it takes into consideration that an individual's visual perceptions of reality depend in part upon the two sets of impressions of the outside world, and that each of these impressions is in itself clear and distinct and has its own geometric perspective differing from that of the other impression because of the distance apart of the eyes.

Serious work in stereoscopic photography has developed into two general techniques, each of which is based upon the general idea that each eye must see its own picture and only its own picture. One general type of device for sterescopic viewing makes use of the difference in direction from which the two eyes see the picture; it depends on the taking of the picture from a series of positions in an arc around the object and the showing of these so shielded by a vertical grid that the observers right eye sees a series of vertical strips composing the right eye picture only and his left eye sees another series composing only the left hand picture. So difficult, however, is it to follow the necessary considerations that it seems impossible for this to ever be used commercially.

The second general technique of stereoscopic reproduction involves the use of filters so chosen that, with a stereoscopic pair of pictures made visible respectively in two kinds of light, each eye sees only the picture intended for it. This method divides into the use of complementary colors and the use of polarization. Using red and green glasses, Norling and Leventhal have produced the extremely entertaining series of pictures known to the public as "audioscopics."

But there are three disadvantages to the use of this method: first, retinal rivalry and resultant eye strain if used over ten or fifteen minutes; second, there is no rotundity or solidity and, therefore, the niceties of stereoscopy precludes the use of varied color in the pictures themselves to enhance the suggestion of reality.

The present is an auspicious time to consider the motion picture field and the subject of stereoscopic motion pictures, because polaroid is now available, which permits for the first time color dimensions. Color movies in themselves are today better than ever before and show promise of still greater improvement. While it will become necessary for photographers to readjust their concepts of lighting and their machines for taking and projecting the movies, there is no longer anything unsurmountable to oppose rapid development of this form of motion pictures. Many problems will remain to be worked out; theaters will need to furnish polarized glasses and to sterilize them after every use.

Polaroid, which is now becoming well recognized and understood by the ophthalmologist, has not yet become generally known throughout the profession.

Ordinary light can be said to vibrate in all directions at right angles to the direction in which it is travelling. Polaroid is made up of a multitude of submicroscopic crystals, each one having polarizing properties, all lined up perfectly and immovably embedded in a transparent sheet. The effect of these crystals is to absorb vibrations along one of their axes. Such alterations of light are not obvious unless a second piece of polaroid is used to observe it. However, if a second sheet of polaroid is placed in front of the lighted area, all goes dark when the axes are crossed or light when the axes are parallel.

Now, when the front polaroid screen is removed and the effect observed through polaroid spectacles, it is observed immediately that one eye sees the screen clearly; whereas the screen appears dark to the other eye. If you tilt your head far over to the side, or remove the glasses and hold them vertically, the effect is exactly opposite. In taking the picture no such material is used; a device containing polaroid filters is mounted on the camera to take two pictures from eye-distance apart and place them on the film side by side. In showing, these two pictures are projected again through the device, and on leaving the device the two eyes are again separated. At this point each eye has a piece of polaroid placed in front of it. The right one transmits horizontal vibrations and the left one vertical vibrations. It means that the right eye sees its right-eye picture but not the other. Conversely, the left eye sees the left-eye picture and not that intended for the right eye. The essential condition that each eye see its own picture and only its own picture is achieved. There is nothing to be adjusted mechanically or otherwise. One forgets the glasses and looks at the living scene unfolding itself before him; and best of all, the eyes behave as they would if they were present at the scene. They converge when the objects are near and change their convergence for varying distances as they normally would do.

HOSPITAL STAFF TRANSACTIONS

MISSISSIPPI STATE HOSPITAL ASSOCIATION, Tenth Annual Session, Gulfport, May 8, 1939.

Aberdeen Hospital: Third Monday, each month, 7:00 p. m.

Anderson Infirmary: First Friday, each month, 6:30 p. m.

Biloxi Hospital: First Thursday, each month. 7:30 p. m.

Bramlett Hospital: Third Wednesday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 12:00 noon.

Field Memorial Hospital: Second Thursday, each month, 6:30 p. m.

Gilmore Sanitarium: Third Thursday, each month, 8:00 p. m.

Greenwood-Leflore Hospital: First Thursday, each month 6:30 p. m.

Grenada Hospital: Second Tuesday, each month, 6:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month. 7:30 p. m.

Holmes County Community Hospital: Second Thursday, each month, 7:00 p. m.

Houston Hospital: Last Thursday, each month, 7:30 p. m.

Ivy Hospital: First Monday, each month, at 7:00 p. m.

Jackson County Hospital: Second Thursday, each month, except July and August, 7:00 p.m.

Jackson Infirmary: Last Tuesday, each month, except three summer months, 7:00 p.m.

King's Daughters Hospital, Brookhaven: First Tuesday, each month, 7:00 p. m.

King's Daughters Hospital, Greenville: First Wednesday, each month, 7:00 p. m.

King's Daughters Hospital, Gulfport: Third Thursday, each month, 8:00 p. m.

King's Daughters Hospital, Yazoo City: First Monday, each month, 7:30 p. m.

Macon Hospital: First Tuesday, each month. 7:30 p. m.

Magee General Hospital: Twenty-fifth each month, 7:30 p. m.

Mayes Hospital: First Monday, each month, 2:30 p. m.

McComb City Hospital: First Tuesday, each month, 6:00 p. m.

McComb Infirmary: Second Thursday, each month, 7:00 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Mississippi State Hospital, Vicksburg: Third Tuesday, each month, 7:00 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

New Albany Hospital and Clinic: Second Tuesday, each month, 8:00 p. m.

Newton Hospital: Second Thursday, each month.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Oktibbeha Hospital: Last Thursday, each month, 7:30 p. m.

Oxford Hospital: Last Monday, each month.

Pontotoc Clinic: First Tuesday, each month, 7:30 p. m.

Rush's Infirmary: First Friday, each month, 7:30 p. m.

Scott County Hospital: Third Wednesday, each month.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

Tylertown Hospital: Second Thursday, each month, 7:00 p. m.

U. S. Veteran's Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:30 p. m.

VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Monday, September 12, and after a supper served at 6:30 p. m. was called to order by the president, Dr. Leon S. Lippincott, with twelve members and one guest present. The program was as follows:

Reports from the Records Department and Analysis of the Work of the Hospital.

Special Case Reports:

1. Vesical Calculi.—Dr. J. A. K. Birchett, Jr. Discussed by Dr. W. E. Johnston.

2. Traumatic Rupture of Posterior Urethra. —Drs. G. C. Jarratt and A. Street. Discussed by Dr. W. E. Johnston.

Report of Vital Statistics.—Dr. F. Michael Smith, Director, Warren County Health Department.

Demonstration of Selected Roentgen Ray Studies: Thoracic spine for discussion; pulmonary tuberculosis (three cases); duodenal ulcer; vesical calculus.

Three-Minute Report of the Literature of the Month:

1. Dr. L. S. Lippincott—Diagnosis of Undulant Fever.

Resolutions on the death of Dr. John Alexander Klein Birchett was presented by Drs. G. M. Street and F. Michael Smith, and unanimously adopted.

The next meeting of the staff will be held Monday, October 10, 1938.

DR. JOHN ALEXANDER KLEIN BIRCHETT

WHEREAS, The Great Physician, Father of all healing, the Giver of life, the One who smoothes the bed of death in His divine allocation of days, on July 22, 1938 found one of His disciples, a faithful son of Esculapius, Dr. John Alexander Klein Birchett, weary and tired after a long day of faithful toil and to him, He gave "His beloved sleep" that caused the cares of duty to drop like a mantle from weary and worn shoulders, and

WHEREAS, This faithful husband, noble father, loyal friend, delightful companion, and good physician, has spent his life among us, whose friendship, comradeship, and professional services have been a benediction as refreshing as gentle rain falling on a sunburnt field, whose life has been one of honor above reproach, clean as the spotless leaves that frame the flower's heart, and

WHEREAS, This eminent physician, the son of an esteemed doctor, generous by birth, who has constantly devoted his life to his profession, a steadfast conformer to the Oath of Hippocrates, an unchanging observer of the approved ethics of medicine, a life-long creditable member of State and County Medical Associations, and

THEREFORE, BE IT RESOLVED, That this staff in humble appreciation of the Master Physician's fidelity to man and omipotent wisdom in giving timely rest to the weary worker, bows with unquestioning submission to the departure of our beloved friend and co-worker, Dr. John Alexander Klein Birchett, and

BE IT FURTHER RESOLVED, That we spread on the minutes of the staff meeting of the hospital a copy of these resolutions and send a copy to his family and one to the press in expression of our profound appreciation and pervading sympathy.

G. M. Street
F. Michael Smith
—Committee on Resolutions.

WOMAN'S AUXILIARY
TO THE
MISSISSIPPI STATE MEDICAL ASS'N

CENTRAL MEDICAL AUXILIARY

The Auxiliary to the Central Medical Society started off its year's work on October 4th with a lovely tea in the home of the president, Mrs. Noel C. Womack.

Assisting her co-hostesses were the other officers of the auxiliary: Mrs. W. F. Hand, Mrs. O. F. Carr, Mrs. J. A. Milne, Mrs. H. F. Garrison, Mrs. Lee Lipscomb, Mrs. Gayden Ward, and

Mrs. F. L. Van Alstine.

Adding a festive atmosphere to the spacious Womack home were lovely dahlias and other fall flowers.

A very brief business meeting was held at which Mrs. John Howell, our state president, made an "official talk" to her home auxiliary.

There were forty members and visitors present. Mrs. Dinser, Mrs. Willey, Mrs. Thomas and Mrs. Harpole were new members from Whitfield and made the attendance from Whitfield 100 per cent. Mrs. A. L. Gray, Mrs. H. B. Cottrell and Mrs. Herrington were the other new names added to the roll, making seven new members at the first meeting of the year.

Mrs. Gayden Ward is directing the Essay Contest for the Central Auxiliary and has the work under way.

REGARDING THE PREVENTORIUM ESSAY CONTEST

The Auxiliary to the Mississippi State Medical Association in its health program is making a great effort to get the people of Mississippi acquainted with the purpose and work of the Mississippi State Preventorium, at Sanatorium, Miss. With this in view, they are sponsoring a statewide contest and offering a five-dollar ($5.00) prize for the best essay on the subject: PREVENTORIUM.

Planting a garden.

Booklets containing information about the Preventorius will be mailed each school upon request to the Public Relations Chairman. The best essay from each school is to be in the hands of the district councilor or local chairman by November 1, 1938, and the best essay from each district to the state chairman NOT LATER THAN DECEMBER 1, 1938!

Rules and regulations of the contest are as follows:

1. All seventh grade pupils are eligible.
2. Use pamphlet material **only**.
3. Write on one side of paper only. (Typewritten, double space preferred).
4. Name of school, county and number on paper. No name on papers. Name to be sent in sealed envelope with school, county and number on outside.
5. Essay not to exceed 500 words.
6. Neatness is given consideration.

The judges will judge these papers without knowing who has written them.

Serving mid-morning milk.

The judges will base their decision on the basis of educational value, public health teaching and from the standpoint of a general practitioner.

The envelopes will be opened by the state chairman in the presence of the president and secretary at the annual meeting in May 1939, Gulfport, Miss.

I am asking each doctor's wife to please co-operate in putting this contest before the public in different schools. Would appreciate hearing from anyone in regard to the contest.

Mrs. W. C. Pool
Public Relations Chairman,

PLANS FOR AUXILIARY PAGES

Our pages this month are mostly given over to the Public Relations chairman and her program concerning the Preventorium and the Essay Contest which is scheduled for October.

An outline for reporting and keeping a Scrapbook has gone to each auxiliary president or press and publicity chairman, and by this channel we hope to hear from each auxiliary of its activities.

I hope to be able to have contributions each month from the various vice presidents and chairmen of standing committees, thus passing on what our Auxiliary is accomplishing as the months go by.

Mrs. F. L. Van Alstine
Press and Publicity Chairman.

MRS. W. H. FRIZELL

It is with great regret we include in our column of news the passing of Mrs. W. H. Frizell of Brookhaven on Sunday night, Oct. 2.

She was an esteemed past president of the state auxiliary, having been active in auxiliary work since the organization began in 1923.

Mrs. Frizell was elected councilor for her district at the first meeting of the newly organized auxiliary in 1924 and served until she was elected to the office of president-elect in 1926, then served as president for the year 1927-1928.

Her quiet practical council was always a valuable guidance in work of the Auxiliary.

WHAT IS THE PREVENTORIUM?

By Virginia Hickerson, M.D.
Resident Physician

The Preventorium, located on the grounds of the State Sanatorium, Sanatorium, Mississippi, is an institution designed to prevent the development of tuberculosis.

There is considerable misunderstanding regarding the function of this part of the Sanatorium. Here children between the ages of four and eleven years are admitted for care, yet only a few months ago the superintendent received an application from a physician, to admit to the Preventorium a man twenty-one years of age! Because of this misunderstanding, and other impressions equally erroneous, a brief resumé of the functions of the Preventorium may be helpful.

The Preventorium has been in operation since 1929. Of the hundreds of children admitted to the Preventorium during these nine years since its opening, none had clinical tuberculosis. The Preventorium is located some distance from the main Sanatorium building, and there is absolutely no contact between the children and the sick sanatorium patients. Children, then, who are admitted to the Preventorium are much safer from exposure to tuberculosis than they, or any other child could be while living at home and being subjected to the possibility of known or unknown contacts.

There are many ways to estimate the value of such an institution, but suffice it to say, that of the hundreds of children who have been to the Preventorium, there is no record of a single boy or girl having developed tuberculosis in later years.

The Preventorium has a capacity of fifty beds. Many more could be used. The turnover is rapid, in that the child as a rule remains six months or less, according to his condition and reaction. The Preventorium is under the supervision of the Superintendent of the Sanatorium and each staff member, including a physician, is thoroughly trained for such work.

The children admitted to the Preventorium are selected with great care. They are children who have a history of living in the home with a case of tuberculosis, or those below par physically as a result of some condition either acute or chronic, or may be of a pre-tuberculous tendency. Examination after admission reveals that a large percentage of these children show evidence of a tuberculous infection. Such children need careful supervision in that they have been infected because of close and prolonged contact in the home. If such care is not exercised, there is great danger of such children developing clinical tuberculosis later in life. The large majority of adults found with tuberculosis give a history of having been raised in a tuberculous home.

After the child is examined it may be found that partial or complete bed rest is indicated for a short period. Each child is put on a regular regimé of exercise and rest. He falls into this routine quickly because he sees all the children doing it. The diet is supervised by a trained dietition. It is specially prepared to meet with the child's requirements for nourishment and growth. In addition to a planned schedule, to suit each child, a search is made for any body defect that may be retarding the child's normal development or hindering his return to health. For example, diseased tonsils and adenoids may have to be removed. Dental defects are corrected, as is every other defect found. These are the precautions that insure for the child, the greatest chance for him to become a healthy adult.

While the treatment at the Preventorium is vitally important to the child, the fact that he has been in many instances removed from contact with tuberculosis is equally important. The parent of each child is urged to observe the precautions to prevent further infection when the child returns to his home, and to continue the régime learned at the Preventorium.

No child, because he has been to the Preventorium, should be considered tuberculous, for such is never the case. Many instances are seen where parents are afraid to allow their children to associate with ex-Preventorium children. Attempts have even been made to prevent these children from attending the public schools on their return home. Such attitudes, of course, are based on ignorance as to the functions of the Preventorium.

It cannot be too strongly stressed that tuberculous children are not admitted to the Preventorium. Many of them, of course, have received a tuberculous infection, but this does not mean that they are suffering from clinical tuberculosis. They are in no way infectious or a source of danger to other children. As these children are returned to normal, the body is able to heal these infections before actual tuberculosis develops. Thus by restoring its children to robust health, it has prevented cases of tuberculosis from developing; thus the Preventorium has performed its function and has accomplished its purpose. It has given the greatest assurance that can be given that tuberculosis does not necessarily gain a foot-hold on children who have become infected with the tubercle bacillus.

OVERHEARD AMONG THE PREVENTORIUM CHILDREN

"I didn't mean to go to sleep during rest hour, but when they all got so quiet I forgot and went to sleep."

"I just love it down here, but don't you tell Mother and Daddy."

"The staff members just talk to you in a way that you don't have the heart to be bad."

"Mother, you need not come to see me during the week because you interfere with my play."

"I feel so sorry for all the little boys and girls whose mothers and daddys won't let them come to the Preventorium for their vacation."

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During the week October 24 to 29, 1938, clinics will be given daily and evenings.

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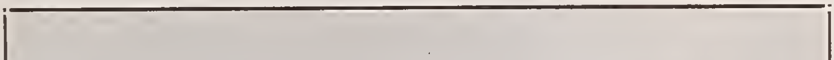

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VOL. 16. BOONEVILLE, MISSISSIPPI, NOVEMBER, 1938 NO. 6.

Dr. J. B. Jervey

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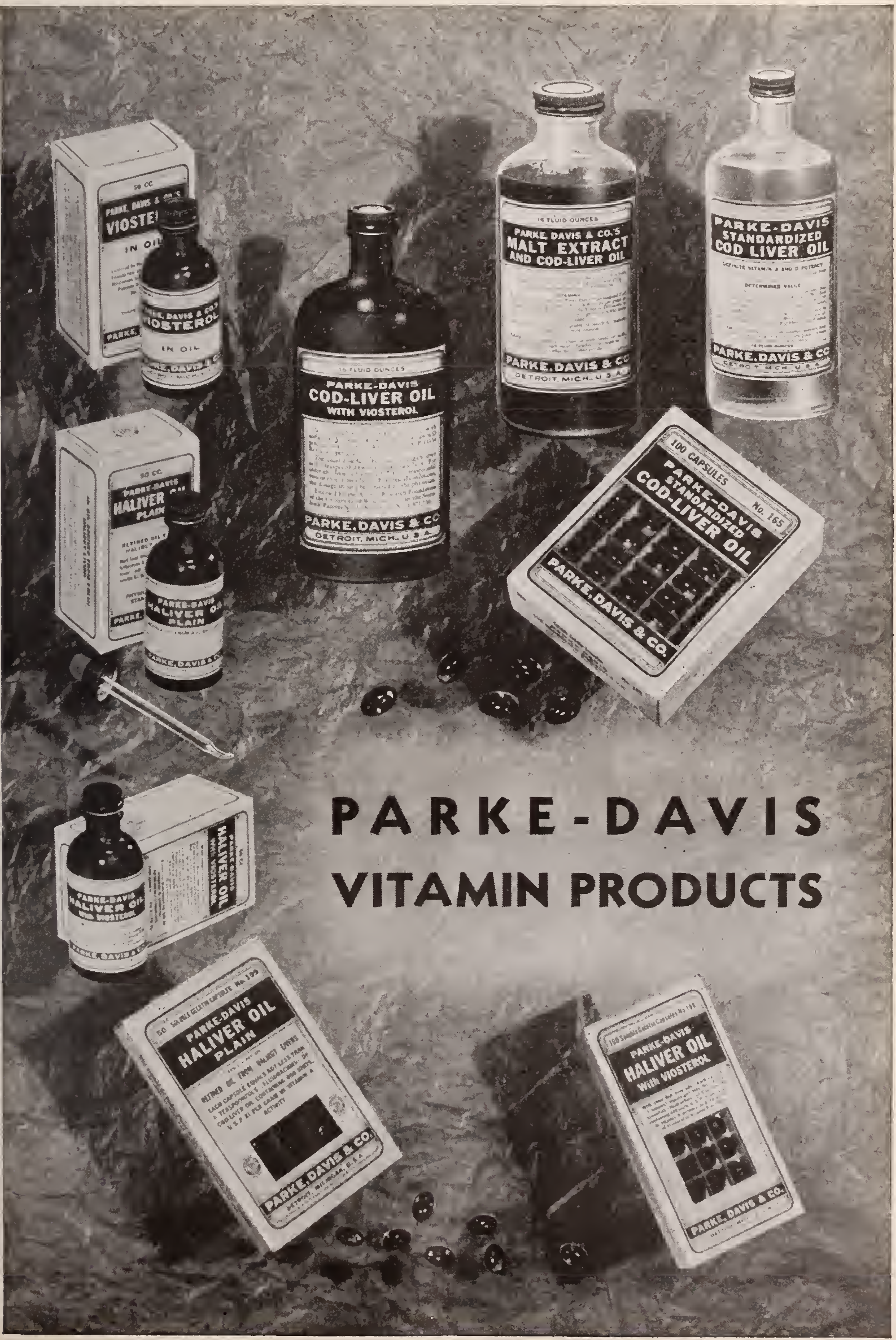
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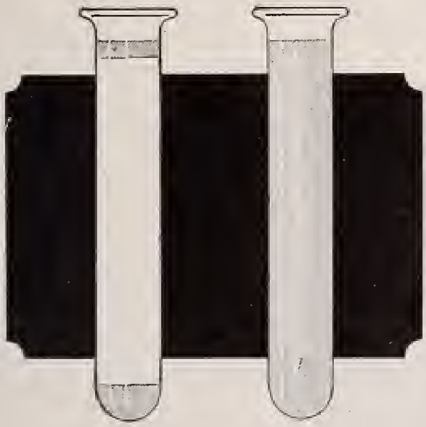

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*Horsfall, F. L., Canadian Pub. Health J.; October, 1937

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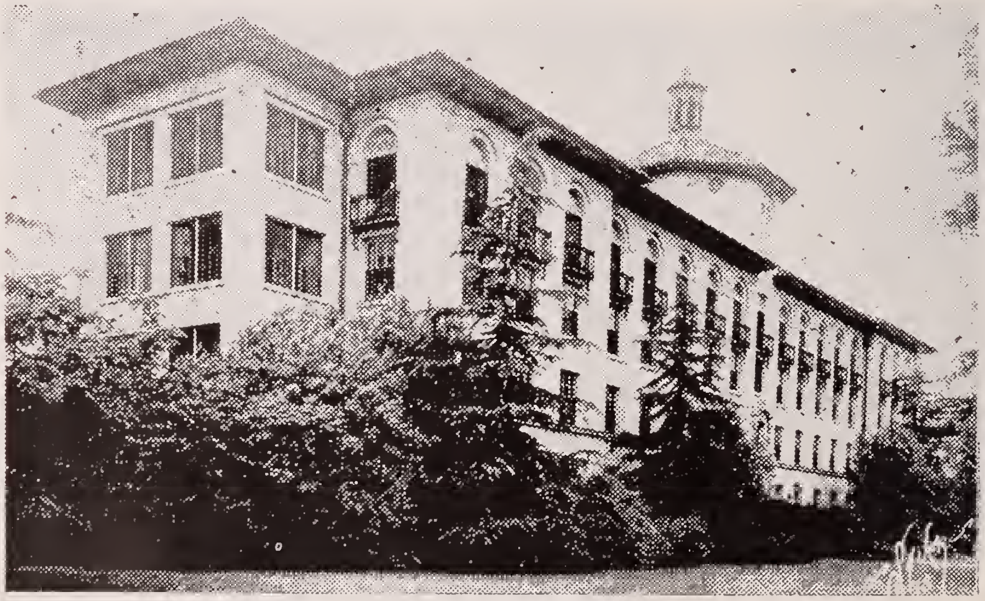

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WILLIAM E. HOWES, M.D.
Attending Radiation Therapist,
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2. History of the present illness
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3. Past history.
4. Family history.
5. Menstrual history.
6. Marital history.
    a. Number of children, miscarriages, type of delivery, etc.
7. Habits
    a. Type of douche used, contraceptives if any.

B. Examination: In the presence of one of the staff members, a pelvic examination is made. This examination should include:

1. Inspection of the external genitalia.
2. Notation of the capacity of the vagina.
3. Palpation of the cervix, notation of its mobility.
4. Bi-manual determination of the axis and size of the uterine fundus.
5. Speculum examination of the cervix
6. Rectal examination with particular reference to parametrial thickening and determination of mobility of the pelvic structures.

Whenever possible, at the time of the original pelvic examination, a small biopsy is taken from the edge of the lesion, after which the vagina is packed with plain gauze. The patient is instructed to return the next day when the packing is removed.

An appointment is given the patient for a cystoscopic examination as the staff members at the Institute are making a particular study to determine how early the parametrial extension tends to choke off one or both ureters, in an effort to determine what treatment will combat most effectively this most lethal complication of cervical carcinoma.

C. Therapy (X-Ray): At present a routine cycle of x-ray therapy is outlined, which of course must vary with the size and condition of the patient. The average patient is given a series of twenty-four daily treatments, six treatments a week, consisting of three ports daily. On larger patients the number of anterior and posterior ports is increased. Usually the pelvis is divided into six areas, 10x15 centimeters or 12x8 centimeters, two anterior, two posterior and a right and left lateral. One day the ports on the right side are treated, the left on the alternate day. A total of 2400 roentgen units in air is thus given each port. Often an intravaginal port is added. The intravaginal cone consists of a metal cylinder some 2 centimeters in diameter, which is directed by touch to the part to be treated. Often the intravaginal port is included daily, giving a total of from 2000 roentgen units to 4000 roentgen units in air directly against the cervix. All other factors are kept the same, namely, 200 kilovolts pulsating potential, filtration 2 millimeters copper, 1 millimeter aluminum, half-value-layer 1.9 millimeter copper, 12 to 20 milliamperes (depending upon the machine used).

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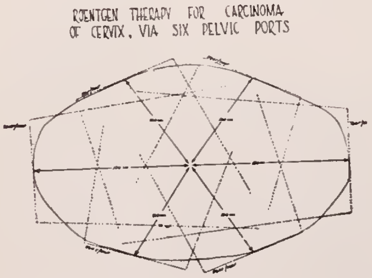
*Ira I. Kaplan, M.D., Director, Division of Cancer, Department of Hospitals.

The Radiological Department measures the size of each pelvis in the antero-posterior and lateral diameters and on suitable paper make a simple outline of these diameters. The center of this cross section is marked "X" and the depth dose measured to this point. The number of centimeters is next measured from the skin surface of all six ports to the central point. Reference to the physicist's depth dose charts is made to calculate a simple per cent of depth dose delivered. This is noted on the margin of the sheet. Then, at the completion of the treatment, the estimated total can be easily calculated from these percentages. This calculation gives us a rough estimate of the radiation energy delivered to the cervix and parametria in a given time interval. The intravaginal dosage is not included in this calculation as the small size of this port precludes any dosage to the structures laterally. This port, however, delivers an intensive dose to the local lesion.

Provided no complications arise during this cycle of therapy, a mild skin reaction should develop. This is usually most marked over the anterior ports and least marked over the lateral areas. The onset of the reaction is usually noted in the fourth week and reaches its height in the week following the completion of the treatment. Then it gradually fades out with some peeling and often leaves residual pigmentation.

Depth Dose For Therapy Via Six Pelvic Ports

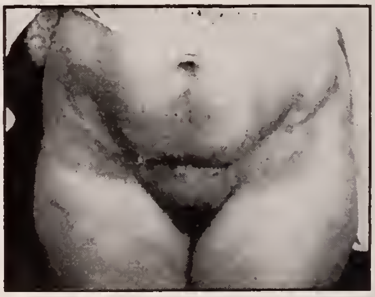

RŒNTGEN THERAPY FOR CARCINOMA
OF CERVIX, VIA SIX PELVIC PORTS

D. Complications From X-Ray Therapy:

The complications we most frequently have to meet are:

(a) Radiation sickness—is best combatted by treating the patient in a large, light, well-ventilated room; by urging the patient to force herself to eat as much nourishing food as possible, particularly fruits and vegetables; to take vitamin B tablets. (Injections of B toxin have been substituted for the oral tablets when the case has severe vomiting or is doing poorly under the oral vitamins). Proper habits as fresh air, regular rest and cheerful environment are encouraged.

Skin Reaction Following Cycle of Three Anterior and Three Posterior Ports
A Variation Used in Treatment of Large Pelves



(b) Radiation cystitis, proctitis or enteritis —The diarrhea is often controlled by giving the patients cooked cereals, boiled milk plus paregoric and daily plain water or starch enemas. Often the treatments have to be cut down or discontinued a few days when this becomes troublesome. Sitz baths and an alkaline urine help control bladder irritability, as frequency.

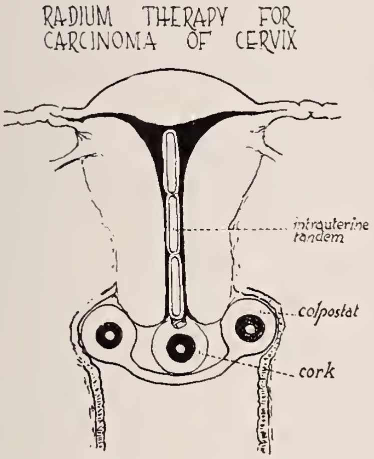
(c) Bleeding—is controlled by packing plus active intravaginal therapy. Sometimes ten or twenty milligrams of radium element is packed against the cervix for a dose of 1000 to 2000 milligram hours.

(d) Temperature—most often due to lighting up of some old pelvic inflammatory disease, is the most difficult and disheartening of complications. Here, rest in bed, Fowler's position, is advised, keeping the bowels well cleaned out with enemas. Hot douches are given to add local heat and remove irritating secretions. Therapy is tried by giving one port per day of only 50 to 100 roentgen units, and watching the reactions. This dose can later be increased if the patient appears to improve. When the above methods fail, often the patient has to be left entirely alone. If we had the facilities of a Fisher apparatus or fever therapy cabinet, the author would be interested in trying out these modalities in an attempt to control this most discouraging complication of pelvic infection and carcinoma.

(e) Anemia—can be treated with hematonics plus repeated small transfusions.

The improvement following this extensive pelvic cycle is often startling: Big fungating, bleeding, sloughing cervices, at the end of four weeks appear normal except that the mucous membrane shows evidence of x-ray mucositis; that is, a grayish pink discoloration of the mucous membrane often covered with a glary mucous. The site of the original lesion appears raw and granular. Usually even the crater-like ulcers have shrunk and appear improved.

Schematic Drawing of Tandem, Colpostat and Cork in Situ for Treatment of Carcinoma of Cervix

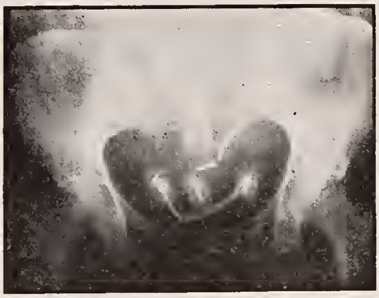


E. Therapy (Radium): At the completion of the x-ray cycle, the patient is given a week or two of rest, then brought into the operating room for radium insertion. The cervical canal is generally dilated and any suspicious area about the external os or of the cervix is again biopsied.

The only disadvantage to this extended x-ray cycle is that the vagina and cervix have often contracted, which makes it difficult to get the usual three-cell radium tandem into the uterus and cervical canal. Often two cells are all that will fit. Then again the vagina will not always hold the colpostat and cork and the central cork has to be left out.

A tandem comprising three tubes of 10 milligrams of radium element, filtration of 1 millimeter of platinum, held in a fountain pen sack, is inserted into the canal. Then a colpostat is stretched into each lateral culdesac. Each arm of the colpostat holds 10 or 15 milligrams of radium element, filtration 1 to 8 millimeters of platinum, and when possible a cork is fitted between these two arms against the cervix. The colpostat and cork have the added filtration and distance of 1 centimeter of rubber.

X-Ray Demonstrating Radium Tandem, Colpostat and Cork in Situ—Please Note the Tilting of the Txis of the Uterus



The vagina is packed with plain gauze. The radium is left in situ for from 72 to 100 hours, making a total of 3000 milligram hours intrauterine and 3000 milligram hours intravaginal radiation.

F. Complications During Radium Therapy: The dose is dependent partly upon the reaction of the patient. The radium is removed when the temperature rises over 102° for any time or if the vomiting becomes pernicious. The patient is placed on a non-residue diet with mild opiates to help tie up the bowels. The nurses are instructed to notify the resident in charge if the patient does not void every twelve hours. A catheter is not used unless necessary as this only adds the complication of cystitis to all of the other possibilities. If there is question of some slipping of the radium, the vaginal packing is removed and re-applied.

G. Follow-Up: After this treatment, usually no further radiation is applied. The patient is instructed to return to the clinic once a month and careful notation of weight, physical and pelvic findings are tabulated. After the radium reaction has subsided and should any parametrial infiltration persist, the patient is again urged to undergo a cystoscopic or intravenous urographic examination to study the condition of the bladder and again to determine, if possible, the development of a stricture of either ureter.

Should the patient fail to return for interval clinic visit, the Social Service Division is notified. They, in turn, contact the home and attempt to find out the reason for her nonattendance.

H. Treatment of Ureteral Stricture: If a ureteral stricture is disclosed, attempts are made to dilate the involved ureter and further study of the function of the kidney is made with intravenous pyelographic study, phenosulphothelein, blood chemistries, etc. When one ureter is completely blocked with resultant hydronephrosis of that kidney and the other kidney is uninvolved, we have found nephrectomy of real palliative value.

I. Treatment of Pain: Injection of alcohol into the posterior nerve roots often aids control of low back pain in the more advanced case. Should the back pain be due to ureteral blockage, nerve block has not been found to be of any value.

Severance of the presacral nerve plexus is of course associated with operative shock and has not proved of practical value.

J. Treatment of Over-Irridation: When a patient has been given a cycle of x-ray therapy as described, with an estimated depth dose of 6000 to 7000 roentgen units at the center of the pelvis, and when 2000 roentgen units have been added to the cervix proper, and then 4000 to 6000 milligram hours of radium therapy have been included, all of this being given within a two- to three-month interval, that patient has received about all the radiation her skin and pelvic organs (including ilium and colon) can tolerate and it is the author's opinion that if this fails, further treatment with x-ray or radium would not only be of little or no value but fraught with great danger and possibly be of positive harm. It is in the over-enthusiasm to retreat some hopeless recurrence or extension that grave danger of late radium or x-ray reactions may occur. Our policy, therefore, is never to add to this original radiation cycle except in the most unusual case.

SUMMARY

(1) The type of examination and treatment rendered patients suffering from carcinoma of the cervix at the Brooklyn Cancer Institute is described.

(2) Some of the complications are listed and suggestions given as to how we combat such complications.

(3) Danger of unexpected radium or x-ray reactions in attempting to retreat cases that have had previous adequate irradiation is stressed.

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X-Ray Therapeutics*

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IT IS EXCEEDINGLY difficult for one engaged in a special medical line of work to present a paper that is of interest to the general practitioner. And yet x-ray treatment is so closely interwoven with the work of the general practitioner that one should be able to present a paper that will, at least, provoke thought.

BREAST CANCER

The proper x-ray therapy of the breast is one of the most difficult in the whole field of x-ray therapy. The pathological and surgical knowledge is essential as well as the life history of the disease and particularly its mode of spread.

X-ray in breast cancer is chiefly used postoperatively. However, I think that it is well to give preoperative treatment in many, if not most, cases. This is for the purpose of inhibiting or destroying the cells and cell-forming tissue with a resultant diminution in all of the cells of the peripheral blood.

X-ray treatment should be given for all inoperable breast cancer. This will materially relieve the pain and often lengthen the life of the patient. Cases of more than five-year cures have been reported by use of x-ray alone, but I always insist upon surgical removal of all cancers of the breast to be followed routinely by x-ray treatment.

If every cancer cell has been removed, postoperative treatment is not necessary. But since it is impossible to know that every cancer cell has been removed, every case of surgical removal of a breast for cancer should be followed with x-ray treatment for the purpose of preventing a recurrence.

It is very necessary that the radiologist know the location of the primary tumor, so that he may effectively irradiate the entire lymphatic drainage of the affected breast. The location of the primary tumor should be recorded before treatment is begun.

If the original lesion in the lower and outer quadrant metastasis may occur as low down on the abdominal wall as the umbilicus, routine therapeutic use of roentgen rays limited to the breast, axilla, and supraclavicular areas would then be inadequate.

Tumors that are situated in the two inner quadrants of the breast tend to metastasize to the mediastinum and to the liver. Such metasases are much more difficult to influence. They are generally rapidly fatal. Tumors in the upper outward quadrant tend to metastasize to the axilla and thence to the supraclavicular glands. It is of the utmost importance that the plan of treatment shall include the whole area in which metastases may occur, and that special attention shall be given the site of most probable metastasis.

Histological grading is important and the radiologist should have this information, but a knowledge of the rate of growth is even more important to him. Rapidly developing tumors must have early treatment if metastasis is to be prevented. Slowly developing tumors metastasize slowly. The need of immediate irradiation is not so urgent. However, the more rapidly growing tumor is more amenable to treatment for the reason that the cells are more loosely held together. It would be well for a chest picture to be made before every operation. Some needless operations could thereby be avoided. Particular inquiry should be made about pain in other portions of the body so as to determine whether metastasis is present in the site of pain or discomfort.

In every case of mammary cancer in a young woman it would be a wise precaution to abolish ovarian secretion and produce an artificial menopause since there is reason to believe that secretion facilitates, and probably stimulates, the neoplastic process. Cancer of the breast of a young woman during her menstrual and childbearing period is a different type of malignancy from that of a woman over fifty. In the breast of the young woman the metabolic and other physiological processes are active. They are influenced by internal secretions, particularly the estrogenic hormones of the ovary. In contrast to this, in a woman over fifty the mammary tissues are atrophied and shrunken and the effects of hormonal stimulation on the breast is practically absent.

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*Read before the Thirteen-County Medical Society, Amory, Miss., Sept. 20, 1938.

In view of the growth-stimulating effects of the sex hormones on the mammary glands, such as hypertrophy and hyperplasia of the epithelial tissue, we think that the activity may be so intense as to lead to unrestrained and uncontrolled over-growth, finally ending in malignant transformation. It is easy to see that in the presence of a malignant growth in the breast in which an active metabolism and an over-stimulating growth energy is permitted to go on that this over-activity will increase the intensity of the malignant disease. In a strain of mice which genetically developed 72 per cent mammary cancer limited strictly to the female, estrin was injected into the male and every one of them developed cancer of the breast. In another strain of mice bred up to where the females would show over 70 per cent mammary cancer they were castrated at two months of age and not a case of cancer appeared in the castrated females. It is very difficult for the surgeon to remove every cancer cell from the axilla. Postoperative treatment of the axilla is imperative if the axillary gland is involved. Proper x-ray treatment is well-nigh impossible if the patient is unable to abduct her arm. When the surgeon leaves the patient with an arm that she can abduct, it facilitates treatment and increases her chance of recovery.

X-ray therapy is useful in many benign diseases. Inflammatory mastitis properly treated may relieve the condition and prevent a malignancy. Cystic mastitis is not benefited by x-ray treatment.

SIMPLE ADENOPATHY

One cause of persistent cough in children is simple enlargement of the groups of lymphatic glands in the mediastinum at the bifurcation of the trachea and about the hila of the lungs. The resultant pressure and irritation upon the bronchi is sufficient to maintain a troublesome spasmodic non-productive cough, often accompanied by a general reduction in the child's vitality, loss of weight and anemia. Provided tuberculosis can be ruled out one may confidently expect spectacular results by the use of x-ray treatment.

The latter stages of whooping cough is often wonderfully relieved by x-ray treatment.

Pain is materially lessened in treatment of carbuncles. Many, if not all, inflammatory conditions are benefited by irradiation.

GOITER

The roentgen therapist is interested in a classification based mostly on the clinical picture of the disease of the thyroid gland. If it were possible to harmonize clinical and pathological findings, a satisfactory classification could be made, but the pathologist cannot always confirm the clinical diagnosis by his morphological findings. Any attempt at classification will find criticism at the hands of the internist, the pathologist, or the surgeon.

The following classification is fairly satisfactory to the roentgen therapist.

1. Hyperplastic
   Uniformly enlarged gland with small alveoli which are lined with tall cuboidal cells.
2. Thyroiditis
3. Adenoma or nodular goiter
4. Simple or colloid goiter

The thyroid gland may be considered as producing a single secretion which increases the rate at which all tissues use oxygen and liberate energy. The presence of adenomata in a hyperfunctioning gland or the occurrence of hyperfunction with diffuse hyperplasia does not alter this fact. There are different types of patients in whom overactivity of the thyroid occurs. The surgical and roentgenological therapy are well established. The simple goiter of non-toxic type is due to lack of iodine and is usually accompanied with under activity. X-ray is therefore contraindicated. Cystic degeneration is not benefited with x-ray treatment.

If the hyperplastic type of thyroid disease were always present in its clinical form and recognized early as such the roentgenologist and the surgeon would bury the hatchet and all would be peaceful and the radiologist would have the co-operation of the referring physician and of the surgeon. It is not a question of which is better, surgery or radiology; it is a question of diagnosis. When the symptoms of weakness of the quadriceps muscles, general fatigue, loss of weight, a ravenous appetite, extreme nervousness, if the metabolism test shows the presence of hyperthyroidism, the treatment of choice is irradiation. It is a well established fact that irradiation will reduce the activity of all the glands of internal secretion, including the thyroid gland.

There should be no controversy between the radiologist and the surgeon. When a case comes to either that can be better treated by the other, there should be no hesitation in referring him. If x-ray treatment is given and it does no good, it certainly does no harm. X-ray does not produce fibrosis. A present or a past thyroiditis is often overlooked by the operating surgeon, and the unjustified and thoughtlessly repeated statement that roentgen therapy produces fibrosis and thereby renders operation more difficult should never be made.

X-ray treatment does not produce atrophy nor injure the thyroid gland in any way. It merely lessens the thyroid secretion.

UTERINE HEMORRHAGE

Treatment of subserous tumors in women in their thirties is usually successful. The intramural tumor of the hemorrhagic type is the one most successfully treated; fortunately it is the one of most frequent occurrence, constituting about 77 per cent. When these occur in women of 40 years or more they are ideal for x-ray treatment.

If in treating fibroids in younger women a temporary amenorrhea is desired, the amount of radiation is reduced early and the ovaries are carefully excluded. The primary shrinking of the uterus and ovaries, sometimes seen after x-ray treatment is often temporary. First, the ovary shrinks to a small indurated mass, due probably to the disintegration of the ripe and ripening follicles; second, after some time has passed, the ovary will be found larger and in favorable cases may return to normal size and consistency. The uterus shares this recovery which occurs when the primordial cells develop and begin to function. Since these cells are the last to be influenced, the recovery may be expected in young women, if the treatment is judiciously given. Many ovaries are enlarged in the presence of a fibroid and they usually become normal as the vascular engorgement subsides. There are some ovarian enlargements which indicate moderate tissue change and they may need supervision even after general treatment is discontinued. This group contains the instances of the non-proliferating type of degeneration, in which the ovary may assume the size of a lemon. Such are associated with the graafian follicles and are promptly remedied.

Hemorrhage of the menopause in which the uterus is enlarged, boggy and fibrosed is amenable to x-ray treatment. If accompanied by psychoses the menopause can be hastened considerably.

Women over thirty-five years of age, afflicted with dysmenorrhea that has resisted all measures of relief and is incapacitating, should be given x-ray therapy.

Cases so treated do not become obese.

The sexual function is not impaired.

Treatment does not increase danger of cancer.

There will be no x-ray burns if reasonable care is taken.

No suggestion of technique is given. Of course one must have a machine with sufficient power. The treatment cannot be mathematically measured. It requires time and experience of the operator, so as to be able to determine the proper treatment in each case. X-ray therapy, like medical therapy, must be governed by results.

The useful field of x-ray treatment is almost limitless. It is a fruitful field for the quack, but that should not, and must not deter the honest efficient roentgenologist from using it when indicated.

Many inflammatory lesions are benefited by x-ray treatment. For this mode of treatment to reach its highest point of usefulness the roentgenologist must have the co-operation of the other specialist and the general practitioner.

Every cancer begins as a local lesion. It may remain local indefinitely or it may rapidly become systemic. When it passes the first lymphatic it is systemic.

While loca., a cancer may be cured by destruction or by removal. When it becomes systemic it cannot be cured by any known means, but suffering may be alleviated and life prolonged by irradiation.

If radiology is to render to mankind the full benefit inherent therein it must have the support and the co-operation of the surgeon and other specialists. Radiology is not something set apart, but it is a definite part of the medical armamentarium.

I. Pellagra A National Problem
II. Alcoholic Pellagra
III. Pellagra Prevention In Mississippi

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PELLAGRA A NATIONAL PROBLEM. Pellagra is today a national problem. Vital statistics from the U. S. Bureau of the Census, including every state in the Union in the registration area with an approximate 90 per cent accuracy, show that in the year 1936 there died from pellagra 3,740 persons. In 1929, when the peak of mortality from pellagra apparently was reached, the U. S. Census Bureau reported 6,793 deaths from pellagra. The state of Texas was not in the registration area at that time and, adding 1000 deaths from pellagra in Texas in 1929—a low estimate—the total deaths in the United States from pellagra in 1929 numbered approximately 7,793. Thus it will be seen that in eight years there was at least a fifty per cent reduction in the death rate from pellagra in the United States.

The decrease in the number of deaths from pellagra was reduced from 7,358 in 1929 to 3,401 in 1936 in the thirteen Southeastern States; while in the remaining 35 states there was an increase in the number of deaths from pellagra from 265 in 1929 to 339 in 1936.

The following table shows the decrease in pellagra in 13 states in the southeastern section of the United States:

	1929	1936
Alabama	666	307
Arkansas	515	213
Florida	315	133
Georgia	878	387
Kentucky	133	88
Louisiana	285	116
Mississippi	754	269
North Carolina	950	351
Oklahoma	279	175
South Carolina	943	275
Tennessee	412	243
Texas	1000*	714
Virginia	228	130
Totals for 13 states	7358	3401

*Estimate.

The following table shows the number of deaths from pellagra in the remaining 35 states and the District of Columbia.

	1929	1936
Arizona	8	5
California	42	87
Colorado	4	5
Connecticut	4	6
Delaware (1)	0	0
District of Columbia	2	3
Idaho	0	1
Illinois	16	14
Indiana	2	16
Iowa	2	1
Kansas	9	13
Maine	3	1
Maryland	10	8
Massachusetts	11	15
Michigan	8	6
Minnesota	5	2
Missouri	27	37
Montana	1	1
Nebraska	3	1
Nevada	2	0
New Hampshire	1	1
New Jersey	2	8
New Mexico	31	21
New York	23	27
North Dakota	0	0
Ohio	21	26
Oregon	3	2
Pennsylvania	15	12
Rhode Island	2	1
South Dakota	0	1
Utah	0	0
Vermont	1	0
Washington	0	5
West Virginia	5	10

Wisconsin	2	3
Wyoming	0	0
Total for 35 states	265	339

(1) Delaware reported deaths from pellagra, 1 in 1932, 1 in 1933, 2 in 1934 and 1 in 1935.

(2) North Dakota reported 1 in 1932; and 2 in 1934.

(3) Utah reported 1 death in 1920; 1 in 1931; 1 in 1933 and 1 in 1935.

(4) Wyoming reported 2 in 1926 and 1 in 1935.

It is interesting to note that California with 87 deaths, New Mexico with 47 deaths, and Missouri with 27 deaths in 1936, with climates approaching that of Kentucky, Arkansas, Oklahoma and Texas, had a larger number of deaths from pellagra than Massachusetts with 15 deaths, Wisconsin 3, and Washington 5, in 1936, states in which the climate is colder. Can it be that pellagra is spreading westward and to a less extent into the Eastern, North Central and Western states? California with 87 deaths from pellagra in 1936 lacked only one of having as many deaths from that disease as Kentucky in which 88 deaths were reported.

Blankenhorn, of Cincinnati, is of the opinion that there are many unrecognized cases of pellagra in the states in which only a few deaths a year are reported at this time; and that as physicians become more familiar with the disease they will diagnose more cases. Fisher, of Youngstown, Ohio, in a paper on "Pellagra in the North," said:

"In studying pellagra in the North we are dealing with a disease which is generally considered to be quite rare. That this rarity may be more apparent than real may be suggested by the fact that during the twelve-year period from 1914 to 1926 there were reported to the United States Public Health Service, 1581 deaths from pellagra in 19 Northern states. Even this large number by no means represents the true total for two reasons—first, the failure of certain states to report their mortality from pellagra in several years, and second, the fact that many cases go unrecognized."

In the Southern states until physicians became "pellagra conscious" they failed to diagnose many cases of pellagra, but now it is probable that in the South physicians err in diagnosing many cases as pellagra which should not be so diagnosed. Certainly at this time the author is having more cases of pellagrophobia, and more cases that had been diagnosed incorrectly as pellagra, than he is having of real pellagra. It is a fact that many cases of chronic nephritis and other fatal diseases in which the patient has a red tongue, stomatitis and diarrhoea, with delirium and death, are diagnosed as pellagra; and in the South, a not inconsiderable proportion of the patients with acute psychoses and toxic delirium, and with and without diarrhoea and dermatitis, are misdiagnosed as pellagra. It therefore seems probable that in the South physicians err in making too many diagnoses of pellagra; while in other sections of the country many patients have pellagra without its being recognized.

Alarmists, from time to time, have made exaggerated statements regarding the prevalence of pellagra in the South calling it the "scourge of the South" and the "plague in the South." The fact is that pellagra never has been, is not now, and never will be a "scourge of the South." Alabama is an average Southern state showing about the average rate of deaths per hundred thousand from pellagra. In the year 1937 Alabama, with an area of 53,000 square miles and population of 2,846,485, had 306 deaths from pellagra out of a total number of deaths 31,175—a low death total rate of approximately 11 per 1000. Therefore, pellagra accounted for less than one per cent of the total number of deaths in Alabama in the year 1937. There was only one death from pellagra in Alabama on an average of 170 square miles of territory in 1937. In other words there were only 7 whites and 17 negroes out of every 100,000 population who died from pellagra in Alabama in the year 1937.

There are no statistics worth the paper they are written on regarding the number of cases of pellagra in Alabama, or in any other state in the Union. Goldberger's guess that there are 20 cases of pellagra to every death from that disease is probably as nearly accurate as any estimate that has been made of the number of cases in any state. Any estimate as to the number of cases in any Southern state is a wild guess. It is true that in some states physicians are expected to report their cases of pellagra, but they are busy practicing medicine and not as a rule feel obligated to report their cases; whereas when a patient dies the doctor is required to fill out the death certificate before the dead pellagrin can be buried. Thus it is that death rates are approximately correct but morbidity rates on pellagra are notoriously unreliable.

Alcoholic Pellagra. The increase in alcoholic pellagra in cities, and in regions of the United States in which pellagra formerly was a rare disease, seems to indicate that ethyl alcohol, the end product of the fermentation of corn, rye, sugar and other carbohydrates, is one of the toxins which may cause pellagra. If not a direct cause, ethyl alcohol, a toxin, certainly is a predisposing cause of pellagra.

When pellagra became endemic in the Southern states it was observed that chronic alcoholics were very susceptible to the disease. The spoiled maize theory was generally accepted at that time and it was thought that corn whiskey contained the toxin responsible for pellagra in alcoholics. Then cases of pellagra were reported in sections of the country in which rye whiskey is the popular narcotic, and later it was recognized that those who drink excessively of beverages of any kind that contain ethyl alcohol may become potential victims of pellagra. A large proportion of the cases of pellagra reported from the Eastern, Northern and Western cities in recent years have been in chronic alcoholics.

Klauder and Winkelman in 1938, in reviewing the histories of 100 pellagrins in the Philadelphia General Hospital found that "alcoholism runs like a red streak" through nearly all of them. Only 3 of the 100 cases did not give a history of alcoholism. Y. C. Shattuck in Boston reported 144 cases of pellagra, 78 per cent of whom gave histories of the excessive use of alcohol.

Howard Fox reported 37 cases in Bellevue Hospital from 1914 to 1928, 20 of whom gave histories of alcoholism—15 were heavy drinkers of whiskey or gin, while 5 were moderate drinkers of alcohol.

Spies and Blankenhorn reported a series of 200 patients in Cleveland, Ohio, suffering from chronic alcoholism and pellagra. They are impressed with the fact that: "Pellagra in the northern part of the United States is for the most part associated with chronic alcoholism while that found in the Southern states is not." They concluded however, that pellagra, whether endemic or of alcoholic origin, is essentially the same disease.

Busman of Pittsburg in reporting 27 cases of pellagra observed by him in ten years said: "We are encountering frequent cases of pellagra in the North, some of which occur in individuals on normally balanced diets. There was a history of alcoholism in 10 of Busman's 27 cases. Ten gave no history of abnormal deficient diet. Only 5 were definitely emaciated as a result of chronic malnutrition."

Hein and Merrill in a study of 29 cases in the University of California Service of the San Francisco Hospital, found that:

"Alcohol excess was common and apparently often a precipitating factor. Seventeen of the men and ten of the women gave a history of excessive use of alcohol. One man stated that he used it "moderately" but went on occasional sprees. The rule was that illness followed "sprees" at a time when alcohol formed the chief article of food, although "alcohol" may have been acting on the intestinal tract or whole body over a prolonged period."

Sweitzer of Minneapolis, reported that seven of the eight cases of pellagra which "he had seen had been on protracted sprees for weeks and months." One of his patients "was a fat prosperous man of 55, living in the country. He came in very drunk, and said that he had drunk all his life."

Boggs and Padget in an analysis of 102 cases of pellagra treated in Baltimore found "40 cases, definitely based on alcoholism in that the cases developed toward the end of a prolonged debauch, or occasionally, in individuals accustomed to a heavy intake of distilled liquors. Of the 40 cases in which the history of alcohol was definite and clear cut, in 36 there was a story of a spree, which had lasted for some four to six weeks. Most of these patients were admitted either still intoxicated, or showing definite post-alcoholic manifestations. The remaining four had not been on a spree, but for long periods had been accustomed to a large daily intake of distilled liquors."

That pellagra is one of the manifestations of a terminal disease in alcoholics is shown by the fact that in Boggs and Padget's 1[illegible]6 cases (45 per cent) showed involvement of the spinal cord. Fifty-one patients (50 per cent) had some type of psychoses but of these only 26 (25.5 per cent) were thought to be pellagrous in their origin (14 had typical alcoholic psychoses, such as delirium tremens or Korsakoff's syndrome).

Winston Rutledge, a dermatologist in Louisville, Kentucky, the land of "good old Bourbon whiskey," reported twenty cases of pellagra in chronic alcoholics. All of them presented the characteristic skin lesions, with varying degrees of gastro-intestinal and neurologic manifestations. Five of the twenty alcoholic pellagrins died. No report of autopsy findings was made. The fifteen who recovered improved slowly. "One patient apparently on the road to recovery drank a halfpint of an inferior grade of alcoholic beverage, and had an acute exacerbation of the skin lesions on the backs of his hands." Rutledge concludes:

"In the absence of a definite role played by alcoholic beverages in the production of pellagra, it appears evident that chronic alcoholics are all potential pellagrins and are more apt to develop this disease following an insufficient diet than those who are not alcoholics."

Spearman and Smith reported pellagra in a 36-year-old alcoholic. The symptoms, including the skin lesions, disappeared after abstinence from alcohol, only to reappear when the whiskey was resumed. Dearman reported a case of pellagra in an alcoholic who drank two quarts of whiskey a day. Without change in diet the skin lesions and gastrointestinal symptoms disappeared when the alcohol was left off. In a few weeks the patient resumed drinking when all the symptoms of pellagra reappeared.

The relief of the symptoms when the alcohol was discontinued and the reproduction of the pellagra syndrome after resuming the drug, is proof positive that in alcoholic pellagra a definite known toxin, ethyl alcohol, is the cause of the disease. Whether or not the alcohol causes avitaminosis is beside the point, for if the patients with alcoholic pellagra had not used ethyl alcohol in beverages, they would not have had the disease; and the symptoms would not have recurred if they had not resumed the use of the toxins. In these cases the relief of symptoms did not follow the use of yeast or any other concentrated vitamin. Dearman did not believe in the avitaminosis theory of pellagra and he did not change the diet of the victims. In passing, it may be added that if one toxin like ethyl alcohol, the end product of the fermentation of corn and rye, is a known cause of pellagra, why should not other toxins of the phenol group, as those isolated by Lombroso and others resulting from the fermentation of corn, rye and other cereals, be either a predisposing or a direct cause of the disease?

The writer has seen only two cases of alcoholic pellagra; and he prescribed for each of these patients only one time. One was a Confederate general, who lived on his plantation, and "drank mint juleps and straight whiskey like a gentleman"—and he was an educated, and a cultured gentleman. He died about the year 1912. The other alcoholic pellagrin was a locomotive engineer, who received good wages, he was a "good liver" and he was a "good fellow," who drank "good whiskey." He lost his job on account of his drinking and died in 1910 or 1911. It does not seem likely that avitaminosis could have been a factor in the production of pellagra in these two cases.

The relation of cause and effect between ethyl alcohol and pellagra in alcoholics is clearly established. Ethyl alcohol is a known gastro-toxin in that it will produce acute and chronic gastritis,—the latter associated with hypochlorhydria or achlorhydria. Ethyl alcohol is a known hepatoxin which produces acute and chronic hepatitis—the terminal stages of the latter being called Lannaec's cirrhosis. Ethyl alcohol is a known neurotoxin, which produces all forms of neuritis from optic neuritis to multiple neuritis. It also is an accepted fact that ethyl alcohol is a toxin that causes changes of the cord and brain found in alcoholic insanity of varying degrees from delirium tremens to the hopeless Korsakoff's syndrome. Incidentally ethyl alcohol is a toxin that causes the anxiety neuroses and profound melancholia. It is said that 40 per cent of all suicides are due to alcoholism; and the suicidal tendency in pellagrins is well known. Ethyl alcohol is a toxin that also affects metabolism. It is not unusual to see the obese red-faced alcoholic become pale and thin before pneumonia, cirrhosis of the liver, nephritis, pellagra or other terminal disease ends his miserable life. Alcoholics are prone to develop various skin diseases from simple erythema to generalized eczema, which often subside when whiskey and other alcoholic beverages are left off. In a recent fatal case of cirrhosis of the liver, before there was ascites the victim had a red beefy tongue and a severe bilateral eczema of the lower limbs and to a less extent on the abdomen and back which persisted until he was forced to leave off alcohol, when the dermatitis disappeared not to return before his death six months later.

It is now the fashion, or the mode, in medicine to endeavor to make all the phenomena observed in pellagra fit in with the vitamin G deficiency theory. Blankenhorn and Spies surmise that alcohol interferes with the appetite and that the alcoholic pellagrin has starved himself into pellagra; and Boggs and Padgett suggest "the plausibility of the theory that either alcohol itself destroys the pellagra-preventing factor in the gastro-intestinal tract, or the gastro-intestinal tract is altered by the large amount of alcohol that is incapable of assimilating the pellagra-preventing factor." The "pellagra-preventing factor" is an erudite, euphonious term that sounds "highbrow" and convincing to minds which "follow the paths of least resistance"; but it seems that these gentlemen are "putting the cart before the horse"; and that the burden is on them to prove their case, when the known toxin, ethyl alcohol, produces lesions and symptoms referable to the alimentary tract, nervous system, and skin very similar to all those observed in pellagra. If it cannot be proved that alcoholic beverages in some strange and mysterious way inhibit or destroy the "pellagra-preventing factor" why not admit that alcohol is one of the toxins that causes pellagra?

A few years ago a drug firm in Kansas City sent trucks loaded with Jamaica ginger into the rural districts of Kentucky, Tennessee, Alabama and Mississippi, prohibition states in which Jamaica ginger was used as a substitute for whiskey. At least a thousand cases of multiple neuritis resulted in many of which the victims had bilateral paralysis of the hands and arms, and feet and legs. Undernutrition, or avitaminosis, was not apparent in any of the cases treated in our clinic. All of them gave a history of paralysis that came on in a few days following the ingestion of from one to four ounces of the Jamaica ginger. It was supposed that the manufacturer of the alcohol sold to the drug house had used faulty methods in fermenting sugar or grain and had made isoprophyl alcohol, which differs from ethyl alcohol by a few hydroxyl molecules. Certainly no one would claim that in these cases the multiple neuritis was due to vitamin B deficiency, because the paralysis followed in a few hours, or days, after taking the alcohol. It is an interesting fact that the toxins which Lombroso, and others, isolated from fermenting corn and wheat belonged to the phenol group, which are closely allied to ethyl, methyl and finally to phenylic alcohol, the phenol known as carbolic acid, the most poisonous of the alcohol group.

It would be interesting if some researches can be made over a long period of time feeding dogs made alcoholic by using the same narcotic beverage with which men destroy themselves, on diets rich in Vitamin G to determine whether or not after liver changes had been produced in the animals they do not develop "black tongue." Certainly the victims of alcoholic pellagra would not have developed the disease if they had not become addicts to a habit or an indirect cause of the disease. No one can deny that ethyl alcohol is not one of the etiologic factors in the production of pellagra.

Alcoholic pellagra is rarely cured except in almshouses because the victim, in the great majority of cases, as soon as he gets out of the hospital will resume the use of the toxic narcotic beverage that caused his malady.

Alcoholic pellagra is not a rare disease and it is increasing directly in proportion to the increased consumption of alcoholic beverages. Government reports show that the consumption of beer (5 to 10 per cent) ethyl alcohol, wine, (10 to 20 per cent) and whiskey (40 to 50 per cent) has increased from 300 to 400 per cent in the last five years. Reports from New York, Boston, Chicago and cities all over the nation show about the same percentage of increase in insanity and cirrhosis of the liver caused by alcohol. State and private hospitals all over the United States report that they cannot take care of the psychotic alcoholics they are called upon to treat.

Ethyl alcohol is one known cause of pellagra that could be eliminated if all the people of the United States had the good sense and moral courage to abstain from the beverages that contain a toxic, habit-forming narcotic drug.

Shakespeare goes to the heart of the alcohol problem as applied to pellagra, when in Othello, he had poor Cassio to exclaim: "Oh, God! that men should put an enemy in their mouths to steal away their brains!—that we should, with joy, pleasance, revel and applause, transform ourselves into beasts."

Pellagra Prevention in Mississippi. Following the report of the epidemic of pellagra first reported in Alabama in 1906 many cases were found in Mississippi; and the physicians of that state were among the pioneers in studying pellagra and in making a constructed effort to prevent and cure the disease. A pellagra conference was called at Gulfport in November, 1908. Among the Mississippi physicians who participated in that conference were Fowlkes of Biloxi and J. R. Williams of Houston. Among those who studied pellagra in insane hospitals was Dr. Buchanan, psychiatrist of the East Mississippi Insane Hospital at Meridian. The question as to whether or not the insanity found in pellagra was different from other psychoses was then discussed. Buchanan said:

> "I do not understand the term "pellagrous insanity." I have seen no mental symptoms in the cases treated that were different from what have been observed in other patients, and I have noted practically the same conditions in those who became insane from ill health and general debility due to other diseases. In fact, some of the late nervous manifestations so closely resemble the symptoms found in degenerative nervous diseases, such as syphilis and paresis, that it would be difficult to make a diagnosis from the nervous and mental symptoms alone—but taken in conjunction with the other symptoms of pellagra the diagnosis is easy."

E. H. Galloway, son of the revered Bishop Galloway of the Methodist Episcopal Church, was then Secretary of the Mississippi State Board of Health. Impressed with the seriousness of the epidemic State Health Officer Galloway, realizing the importance of accurate statistics regarding the number of cases and the number of annual deaths from pellagra, urged the physicians of Mississippi to report their cases of, and deaths from, pellagra. He was so successful that in 1914, 1192 deaths from pellagra were reported. Thus it was found that pellagra was a major problem in Mississippi. In the year 1915 there were 1535 deaths reported from pellagra in Mississippi and the problem of its prevention became more acute. It is probable that there was no more pellagra in Mississippi than in Alabama or Louisiana, but more cases were reported because Galloway, a part time secretary of the Mississippi State Board of Health, had the initiative to lead Mississippi physicians to report their cases of, and deaths from, pellagra. The first state-wide statistics of value on pellagra were those collected by the Mississippi State Board of Health. Galloway reported that there were 10,954 cases of pellagra and 1,192 deaths in 1914 as compared with 6,991 cases and 795 deaths in 1913. Galloway gave the public the facts regarding the increase in pellagra, and having the confidence of the medical profession in his state he made a remarkable record in reducing pellagra in Mississippi. When he resigned as health officer in 1919, the number of deaths from pellagra had been reduced to 495.

In 1915 Galloway, impressed by Goldberger's "unbalanced diet" theory, induced the Governor of Mississippi to offer pardons to convicts who would agree to live on a diet prescribed by Goldberger over a period of six months. Thus it was in Mississippi that pellagra was produced experimentally by feeding convicts on a high carbohydrate, low protein diet.

One of the heroes in the study of pellagra was the late lamented W. A. Dearman of Long Beach, a country doctor who did his own laboratory work. Fired by the spirit of research he experimented on monkeys and rabbits in an effort to find the cause of pellagra. He did not succeed, but he made a noble effort, which attracted the attention of those interested in pellagra; and Dearman deserves to rank with the "Alabama Student," immortalized by William Osler. While the majority of the physicians of Mississippi accepted the Goldberger "unbalanced diet" theory, Dearman believed that diet was only a contributing factor, and that an infection was the exciting cause of the disease.

After the resignation of Galloway, W. S. Leathers, Dean and Professor of Pathology in the Medical Department of the University of Mississippi was made Secretary and Executive Officer of the Mississippi State Board of Health. Leathers also continued his duties as Dean of the Medical Department of the University of Mississippi. He proved to be a medical statesman and a sanitarian of the highest type. He was able to impress the Mississippi State Legislature with the need for increasing appropriations for protecting the people of his state from the ravages of disease, including pellagra, and he built up a state department of health in Mississippi then second to none in the United States. Believing in Goldberger's "unbalanced diet" as the cause of pellagra, Leathers set out to teach the farmers of Mississippi the need for diversified farming and for a varied diet for food raised at home. At the same time he carried on a campaign of education against soil pollution and as a result the death rate from pellagra, malaria, hookworm, typhoid fever and other endemic diseases in Mississippi decreased to a surprising degree. Nothing finer in the history of public hygiene has been seen than the cooperation of the physicians of Mississippi in their efforts to reduce the ravages of pellagra, malaria uncinariosis and all other endemic diseases. Pellagra was reduced from 1535 deaths in 1916 to 495 in 1919, and the death rates from other endemic diseases declined at about the same ratio.

Leathers was called to Vanderbilt University to build up the Department of Preventive Medicine and later he was made Dean of the Medical School of Vanderbilt. He is today the outstanding man in preventive medicine education in the world, and he ranks with the highest among deans of medical schools.

Felix Underwood succeeded Leathers as State Health Officer of Mississippi and, like Leathers, is a medical statesman, who has been successful in getting the money from legislatures with which to purchase public health; and the Mississippi State Department of Health under his direction has continued to expand its usefulness and grow in efficiency. State Health Officer Underwood has surrounded himself with highly trained experts, and he and they enjoy the complete confidence of the physicians of Mississippi. State Director of Vital Statistics, R. N. Whitfield, is not merely a statistician but shows positive genius in providing the public with information needed to stimulate an interest in public health. The statistics on pellagra from 1914 to 1937 as compiled by the Mississippi State Department of Health show a remarkable decrease in the number of deaths from pellagra.

DEATHS FROM PELLAGRA 1914-1937 IN THE STATE OF MISSISSIPPI

Year	Total	White	Colored
1914	1192	256	936
1915	1535	275	1260
1916	840	165	675
1917	1086	212	874
1918	746	137	609
1919	495	109	386
1920	554	100	454
1921	684	82	602
1922	448	75	373
1923	413	88	325
1924	413	70	343
1925	561	87	474
1926	564	104	460
1927	689	131	558
1928	747	99	648
1929	727	96	631
1930	573	97	476
1931	541	71	470
1932	308	60	248
1933	267	42	225
1934	211	53	158
1935	222	59	163
1936	264	64	200
1937	236	50	186

Pellagra deaths in Mississippi:

	Total Rate	White Rate	Colored Rate
1937	10	4.4	17.1

A reduction from 1535 deaths from pellagra in 1914 to 236 deaths in 1937 in Mississippi proves the return from money invested in public health; and it argues well for the complete eradication of pellagra in Mississippi in the next few decades.

It will be noticed from the above table that pellagra increased from 413 cases in 1934 to 747 in 1928. Why was this increase during the years of prosperity before the depression that began in 1930, when a well known pellagrologist predicted that pellagra will increase in the Mississippi Valley 100 per cent in 4 years? Even though Mississippi felt the depression from 1929 with 727 deaths reported, the number decreased to 211 in 1934. In 1935, there were 222 deaths; in 1936, 264; and in 1937 there was a further reduction to 236.

Government Intervention in the Field of Medicine*

C. E. BOYD, M.D.
Aberdeen, Miss.

ONLY TO THE unthinking, or those who will not think or cannot think, is there any question of what the medical profession has accomplished for the human race? The things that have been done need no enumeration, but stand out paramount among the great achievements of the ages. I say paramount for the reason that except to those who place money above all else, that the health, happiness and physical well-being of the people stand first. From the days of Hippocrates to the present date, the medical profession has labored, often times under handicaps that seemed insurmountable, ceaselessly, tirelessly and unselfishly for the betterment of mankind. The result to us is that our own country compares favorably with any other country on earth as to morbidity and mortality rates, and the trend has ever been forward and upward.

All this has been accomplished without government supervision, but the propagandists are telling the people that conditions have changed, that the low income groups are not receiving adequate medical care. This statement is open to grave question and comes from propagandists, lay people, social workers and some members of our profession far above the low income group or who are not in close touch with the real medical needs of the people. Granting the fact that conditions have changed, and yet just as true, that conditions have changed in the past, and these changes when imperative have always been met and dealt with in a sane and efficient manner by the medical profession. Human nature does not change, neither do the basic principles underlying ALL change, adjustments have been made and will continue to be made when and where necessary. All this has been accomplished and can again be accomplished by the initiative of the medical profession, and without supervision, for we still have in the profession just as capable thinkers as at any time in the past, men whose loyalty to humanity cannot be questioned.

Who besides a lawyer knows anything about the profession of law? And yet the laws of the land are largely written and wholly interpreted by lawyers, with the privilege of so doing granted to them without question. Who under Heaven other than the medical profession knows or has any right to say what is needed in a medical way? Yet they propose to ignore the achievements of the ages and reduce the members of one of the highest callings on earth to the ranks of poorly paid hirelings, to be dictated to and directed hither and yon, by a bunch of lay-men and cheap politicians. If the government that is so determined to see that the low income group receives what it considers adequate medical care, will first see that this same group has comfortable homes, adequate shoes, adequate clothes, and adequate food, then a far less amount of medical care will be found to be sufficiently adequate. The alarmists are deliberately misleading and confusing the people causing them to believe they are being exploited by the doctors. Because someone in the high income group is charged adequately and justly for some of the things he may need or thinks he needs in the way of medical care, does not at all mean that indigents are neglected, or those in the low income groups over-charged for what their doctors know to be necessary for them when sick. How can these alarmists feel that they are acting for the best interests of the masses when facts that are incontrovertible prove that health standards have been lowered in every country on earth with government interference? This same group of sympathetic agitators who are shedding such briny tears over the medical needs of the down trodden and poor, and at the same time consistently allowing the money changers to corner on and so hoard the wealth of the nation that the very life blood is being trampled from the class they are professing to help, and

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*Read before the Monroe County Medical Society, and also before the Pontotoc Society. Both societies endorsed it by unanimous vote and went on record as wishing it to be published in **The Mississippi Doctor.**

at the same time camouflaging their iniquitous fatoritism by regimenting the medical profession as hirelings to the service of the people they have so wantonly allowed to be exploited.

If the service of all the men composing the medical profession can be regimented to the service of the poor for a pittance then surely, surely the excess wealth of a few men should be regimented to the service of the same class, when sick or injured. If the government cannot and will not prevent the hoarding of the wealth into the hands of the few, thereby causing starvation and misery, can it be called fair to **regiment** the medical profession and hedge it about by lay restrictions to the services of the classes made paupers directly by the favortism shown to the few? If the government cannot prevent pauperism and misery, how can it hope to better health conditions that are unexcelled and unequaled by any country now? There is no thought behind the move to raise the quality of service to the poor for they know we are equal to any country now. There is no thought of bettering the conditions of the doctor, but they very much desire to regulate him. They know that by the so-called socialization of medicine, that thousands of jobs will automatically be created for lay-men and cheap politicians. They are claiming that the relationship between patient and doctor will not be disturbed, but all who have had dealings with the so-called relief agencies for the past few years know this to be an evasion of the truth. Interference of every kind and type will be met. The government is already paying a good salary to men who know not the first principles to give courses in first aid. These courses not only are entirely unnecessary but well calculated to be downright harmful in many cases. Home aid workers (whatever that may be) are being paid to see after the families of relief workers, yet a doctor with all his training is ignored when an indigent becomes sick or injured. If these agitators really have interests of the poor at heart, they will not disturb the old relationship existing between the profession and the public, as will surely be done when the profession is regimented into government service.

The editor of our Journal, THE MISSISSIPPI DOCTOR, who has no peer in thinking or in journalism, states that there must be a meeting ground where the profession and the government can co-operate for the benefit of humanity. There is. Proper adjustment in the distribution of medical service by the profession and certainly more practical teaching in our medical schools will help in this adjustment. Medical students should and must be taught that it is entirely unnecessary for all to try to be specialists and surgeons and that all doctors to serve the masses properly and efficiently cannot live in cities. A reasonable amount of decentralization and discouragement of over specialization is of monumental importance to the profession in meeting the criticism that is being used in favor of socialization. Let the profession make the needed adjustments, then when a family falls into the group who absolutely cannot pay, through no fault of their own in many cases, they should justly be considered charges of state and government and a reasonable fee paid for their care for such time as they remain sick or injured, instead of leaving the entire burden in the hands of the profession as has been done since time began. This should be done and must be done without heaping the iniquities of regulation upon us. Leave us alone with the patients who can pay us and who will retain their self respect by so doing and let state and government *share* with us the burden of the indigent then all will be well. That the majority of the medical profession more than willing to do their share in caring for the ills of humanity has been proved repeatedly throughout the ages, this feeling of service is inborn and unexcelled by any group or profession. But I do not believe that those of us who think will ever willingly submit to domination by lay people and politicians.

That the state and government meet us at least *part* of the way in caring for the poor and needy is only just, and should be done without regulation but let them by their misguided zeal force us into regulation then by their own act they hamper us in our relations to the poor and needy and at the same time very much lower the standard of service that we always have been able to give them.

Then And Now, Or Forty Years In Medicine

By DR. R. B. BAUGH, M.D.
Polkville, Miss.

In March of this year just forty years ago, I received the degree of M.D. from the old Memphis Hospital Medical College of Memphis, Tenn., now better known as the University of Tennessee. In this modern day, forty years is an honorable, but scarcely a venerable age. Gone perhaps is the unbridled exuberance of youth and adolescence, but advantaged by long experience and seasoned by mature judgment, I turn confidently toward the half century mark, refusing to be awed by any calendar fetish. No matter what the record the years may write, we age only in that hour when thoughts turn musingly backward instead of resolutely onward.

I am proud of the fact that I am classed in the category of a country doctor, who is fast passing and will soon be only a silent memory.

I well remember my first impressions of the doctor of fifty years ago. He was usually an elderly and a pompous being, wearing a grave and decorous air and full of dignity. When he came in to see a patient, he first looked at the tongue, then pulled out an enormous size silver watch and judged the temperature by the pulse rate. Of course if the patient happened to have a tachycardia he was judged to have a hell of a fever and was treated accordingly. He was given a rousing dose of senna rhubarb and dovers powders, and everything else he happened to have in his ponderous saddlebags. If these didn't relieve the patient he was next given a calomel and colycinth pill of collossal size. If the patient survived he was lucky, if not the family was bereaved.

In the old days, nearly all diseases were classed as colds and fevers. If the fever continued many days it was a safe bet that it was typhoid and that meant a long drawn out fight. When the fever went high the patient was given just enough water to moisten his tongue and if the fever did not dehydrate the body the treatment did and he promptly joined the heavenly choir.

But God bless the old time country doctor. He was everybody's friend; he was everybody's councilor. No one ever went to him in his troubles that ever went away uncomforted. He was our advisor, he was our protector. He was the first to usher us on the stage of an active life and the last to leave us on the shore of an endless eternity. He was just as much a builder of modern medicine as Koch, Lister and Pasteur, only his sphere was less limited.

Viewed from the pinnacle of modern medicine of today, a retrospection through the mist of forty years only serves to bring back the fact how wholly unprepared the graduate of that day was to cope with the formidable task of fighting death and disease and its awful train of sequences. The teaching and clinical training of that day bears no comparison to modern times.

Our nearest connection to a surgical operation of that day was viewed from a distant seat in the ampitheatre to the bottom of the bull pen below, and then we generally had to look through some other fellow's head or over his shoulder that was seated below us. I would sometimes seek the darkened seclusion of those high seats in the pidgeon roost to escape the severe grilling on quiz nights; but alas, none ever escaped the watchful eye of Dr. Frank A. Jones, a noted and beloved instructor. I well remember one night when I fancied my complete seclusion in the darkened shadows of the highest roost, that he pointed his long finger at me and bellowed in a stentorian voice, "Baugh, bound and floor Scarpa's triangle," after hemming and hawing and a half dozen failures he advised me to have my head renovated or go jump in the river, adding that he was quite sure that I would make a real doctor no doubt by the time he became the King of England.

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*Read before the staff meeting of the hospital, Morton, Miss.

In the summer, before I became a senior, I was appointed an interne in the charity hospital at Vicksburg. After being there for a few days I was assigned to assist our chief of internes, a doctor, W. W. Spencer, of Pontotoc, Miss., a noble fellow who has been dead for a number of years, who was at that time in charge of the colored female ward. We had several prospective labor cases on hand which we knew were likely to happen at most any time. Now to be candid and frank with you, gentlemen, I can truthfully state that I had never seen or participated in a real labor case. Fully aware of what might happen at any time I ran back in my mind all the teachings of dear old Prof. Erskin on obstetrics, as I watched him demonstrate all the different positions on a rubber manikin, with a small foetus of the same material.

It all looked so simple, easy, painless and bloodless, that I thought no one should ever make an error therein.

About a week later, I was called about twelve o'clock one night to the ward by the chief who stated that we had a negro girl in labor. He further advised me that he had made a vaginal examination, and for me to clean up and tell him what position I found. Well, from the noise that girl was making, I soon decided that Dr. Spencer had made a serious mistake in calling me, as it should have been the undertaker, but any way I collected my scattered nerves and did as instructed. Well, gentlemen, before God, so far as the information is concerned that I obtained from that examination, I might as well have stuck my finger in an augur hole, and to this late date I would not swear whether or not I made a vaginal or rectal examination, but I gave my chief a knowing look and said a LOA. He slapped me on the shoulder and said fine, and went off to bed, leaving it with me. I thought if ever a man needed nerve, I needed it that night, for after that negro had about seven conniption fits and as many piercing screams, I was on the point of calling the police or fire department for help when the cry of a lusty baby somewhat relieved the strain. As I went to bed an hour or two later, I felt that all Vicksburg would be proud of the wonderful obstetrician in their midst, but if any mention of it was made in the papers I never noticed it.

Forty years of continual work in obstetrics can mature your judgment, and ripen your experience, and as the silver hairs now crown my temples, I no longer become at a physiological process.

We of the older generation of doctors will soon pass on, and a newer and more modern one will take our place. Yet our lives and our work will not have been in vain.

In the phenonema of life we find that every thing has a purpose and everybody a destiny. Every ray of sun, and every little leaf and even the daisy that is born on the wide expanse of the limitless desert, as it unfolds its blushing petals and wastes its sweetness on the scorching air, unseen and unknown, even fills its place in the universe of God.

Every science and every thought, word or deed, blends in a harmony and beauty of an ever increasing purpose toward which the universe moves. God in his economic plan of constructing the world so arranged it that none of its energy should be lost. In God's workmanship we find no failure, no mistakes or errors. Ah, man, thou whom God didst create in His own image, truly thou art fearfully and wonderfully made, for thou partaketh of the nature of things earthly, sooner or later wilt lay aside this mortal coil and leave it as a food for the sordid worm, yet there has dwelt in thy life and work and influence, a spirit that, like its Maker, will live on and on long after the sun has ceased in its stupendous orbit and the stars no longer twinkle in the blue mist of the heavens.

THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

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R. B. Caldwell, M.D.
Thomas J. Brown, M.D.
Lawrence W. Long, M.D.
H. Lowry Rush, M.D.
J. Gould Gardner, M.D.
W. H. Frizell, M.D.
D. J. Williams, M.D.

Published monthly at Booneville, Mississippi

Annual subscription $1.00

Entered as second-class matter, January 19, 1926, at the post-office at Booneville, Miss., under the Act of March 3, 1870.

Out of the state we have had inquiries about the law governing the distribution of funds for our indigent sick and we are giving a brief outline of it. We have a kind of dull system that is not as efficient as it might be, but it is far ahead of anything we know in the country. To a certain degree we have given a break to the indigent sick out at the Cross Roads and down by the old Mill Stand. We think that our state should have one central charity hospital and then the per capita distribution of funds should take care of the rest on an equal footing. There should be no zoning any where. As our system is right now it may be necessary, but the system should be perfected to where it would not be necessary. No person should be told to what hospital that goes out and drums for charity hospital, doctor, or nurse he must go and the patients whose bills are paid by the state should be ruled out as ineligible. The per capita distribution of funds for the indigent sick should do more than any one other thing to keep us out of state medicine. It helps to distribute the charity load in the profession and it enables the patient to go to the doctor of his choice. It gives merit a better chance and is much more economical considering the expense of travel and delay. We should be very proud of the start we have made in the interest of the indigent sick, but we have much room for further improvement and we should go forward.

We are told that the proper distribution of the world's products would do more than any other one thing to relieve our economic situation. Likewise, we believe the proper distribution of medical service would go a long way in solving our medical problems. But this question of distribution is not so easy. It is reasonable to assume that eighty-five per cent of the rank and file of the profession can do eighty-five per cent of the practice. But it seems, as a rule, that the medical student is trained away from the small town and the rural community. And regardless of how able the practitioner from the small town may be, organized medicine is pretty slow as a rule to accord him recognition, usually distributing the honors to the highly specialized man in the large city. His problem is further becoming more difficult to make a living and keep abreast with modern medicine by an increasing number of his pay patients hotfooting it to the city or around the globe in search of health. The masses must have medical service—this is a necessity; the doctors who are rendering this service deserve compensation—this is justice. But until necessity and justice join hands for a better distribution of medical service our problems will not be solved.

Some of the graduates of the Ole Miss Medical School have mentioned to Dr. P. W. Rowland about a homecoming next spring. This is a good suggestion. Why not? Some think that the graduates for the last ten years only should be included, but we think there should be no limit. Include one and all who have taken their two-year course at this great institution. There is plenty of room to take care of every one who can attend. A homecoming has many values. It helps to keep up friendships which should last through life. It has a broadening influence from an educational standpoint, and it renews and activates loyalty to the institution. Interest in a homecoming has no doubt been aroused largely by the enthusiasm of Dr. P. W. Rowland who is giving the medical school a fine library. Under the sound judgment and wise leadership of Dean Guyton and the vision and persistent activities of Dr. Rowland this two-year school has been placed at the very top of the ladder. A homecoming and a survey of the successes of the graduates will make this evident to the medical world. We should be proud of our medical school. It is giving a lift to many young men of limited means, but young men who have a professional mind, a medical soul, and a missionary heart. Let us have the homecoming, the reunion, and let us put it in the hands of Dr. P. W. Rowland, the man of vision, scholarship and application.

You will read the paper of Dr. C. E. Boyd of Aberdeen and it will make you think. Dr. Boyd is himself a thinker, he is a great citizen and a most able practitioner. Before our medical problems are solved, the opinion of this type of man must be weighed both by the A. M. A. and the United States Government. He might not be right in every respect, but he knows a lot from first hand information and he is thinking honestly and unselfishly. He is out in the thick of the fight. The free expression of honest convictions will surely be beneficial.

You will read the paper of Dr. R. B. Baugh of Polkville on "Forty Years in Practice" with interest and a good laugh. It is full of good medical history and human philosophy. We have plenty of medical talent in Mississippi and we are glad to have men like Dr. Baugh chime in. We love to see the batting average of the entire profession climbing up the scale. Our hospital system is helping to do this thing.

Dr. Irving Abell will be the chief speaker at the annual meeting of the presidents, presidents-elect, secretaries and editors at the Southern Medical at Oklahoma City. The doctor is just what his name implies and all will be eager to hear what he has to say.

We are deeply grateful to our advertisers. They make it possible for us to publish this journal. Other things being equal we will thank you to trade with them.

A few real specialists and a larger number of all-round broadly educated and conscientious practitioners would be more sensible to our present needs perhaps.

The indigent sick needs every consideration and so does the man of limited means, but the man who is able to pay and is so anxious for a cut rate, might bear a little more watching.

Over at Oxford we are having a fine postgraduate course this week. These courses are doing much for the profession of the state and in turn for the health of the people.

The Southern Medical Association being over, then comes the Mid-South as one of the next big medical events.

We are very grateful to Dr. George W. Crile of Cleveland for a copy of his recent book, *Surgical Treatment of Hypertension*. Hypertension is a subject that has been of intense interest to the profession for a number of years, but of very recent years the surgical treatment has been of special interest. The purpose of this volume by Dr. Crile is to present the conception of the genesis of essential hypertension. A great amount of investigation has been done to reach this conclusion. In accordance with his conception of the cause of this condition he has formulated his operative procedure. In his book he describes his surgical procedure and his results and he also reviews what others have done in the field of surgical treatment. In reading the book one is impressed with the great amount of research work in comparative anatomy and physiology done by the essayist and others who co-operated with him. You will also be impressed with the great care with which he selects each case for operation and estimates the surgical risk. This volume as others have done will activate the admiration the people have for Dr. Crile and their appreciation of his consecrated life in the profession for the good of mankind. This book is published by W. B. Saunders Company, Philadelphia.

Concurrent with this issue of the Journal comes the pneumonia season of 1938-39. This fact should be seriously considered since we know that its coming brings, not only, much sickness and expense, but a very heavy death toll to our people. In fact pneumonia is now the third largest cause of death, it being led only by heart disease and cancer. These three have been aptly termed the "captains of death." As yet but little or nothing has been done in efforts to control the two latter causes of death. But fortunately we are now able to do much in our efforts to reduce the mortality of pneumonia. The death rate in true pneumonia is simply appalling. This rate or percentage varies in different seasons, but on the average, I am convinced, it runs, not less than forty per cent. Of course, many doctors will dispute this statement — some claiming that in their hands with some fantastic plan of treatment, that few, if any, deaths occur. This, of course, is an unreasonable claim and does not meet or merit serious consideration. These claimants may, or may not, be conscientious, but they certainly are wrong in their claims. We are told by them that they treat hundreds of cases in a single season. This is too ridiculous to merit refutation, when we stop to consider the fact that the average number of cases treated by the busy doctor runs from one to six cases per season. Granting that these claimants are conscientious, we are forced to conclude that they are very poor diagnosticians. This brings us to the point that is of the most serious importance in dealing with pneumonia patients—namely **diagnosis.** No doctor, it matters not how well informed he may be nor how much clinical experience he may have had, can diagnose, positively, a case of pneumonia from clinical observation and history. Of course, these are of great importance and must be considered seriously and intelligently. But until the pneumococcus has been demonstrated, no one can be certain that he is dealing with a true pneumonia. Even then, the diagnosis is only half made. Not until the organism has been typed is the doctor prepared to treat the case intelligently and scientifically. In 1910 Neufeld, and again in 1913 Dochez demonstrated that there were several types of pneumococci. Since then these types have been subdivided until now we have more than thirty of them. Until the exact type has been found there is, there can be, no specific treatment for the disease. Until this is done, all that any one can do is to treat the patient and not the disease. Although twenty-five years have elapsed since typing was made possible and sera were made available, it is just beginning to be generally recognized that a real specific can be utilized. Since this has been known to be a fact the death rate has been reduced about fifty per cent where the proper serum has been used sufficiently early. The study of this momentous question is most fascinating and I should like to go into detail concerning it, but the point that I am trying, and wish, to bring to the attention of all the readers of THE MISSISSIPPI DOCTOR is that it is possible to treat pneumonia with considerable success, provided a correct and complete diagnosis is made. And that there is but **one** proven remedy—namely, **specific serum.** Fortunately, this typing is comparatively easy and can be quickly done. But, as yet, the price of this serum is so high that it is nearly prohibitive to the class of people that are most likely to fall victims to this very fatal sickness. In a few states and cities it is furnished free to all who may need it and desire to get it without expense to themselves. I feel that this should be done in all states—at least until the quantity used is so great that the serum can be more cheaply manufactured. I am urging all readers of this journal to unite in the effort to get free distribution of this serum and thereby save many thousands of lives each year.

—G. S. B.

RED CROSS ACCOUNT FOR EVERY DOLLAR

Bugles are blowing, drums are rolling, banners snapping in the early morning breeze. It is June 24, 1859. The plains of Lombardy are alive with moving masses of men. French and Italians, 150,000 strong, are aligned against 170,000 Austrians.

By nightfall the Austrians are in retreat. The green, flowing fields have given way to chaos. Fifty thousand men lie dead or wounded and the battle of Solferino has become history.

All that day Henri unant, a young Swiss traveler, watched the carnage from a hillside. He realized the inadequacy of the treatment that would be meted out to these men who, 24 hours before, had been in the flower of manhood, but who now lay helpless, close to the door of death. And he realized that something could be done to help them.

Going into the village of Castiglione, he organized the women into volunteer bands. He persuaded them to help friend and foe alike. Shortly all available space in the village was occupied by wounded. Other villages did likewise and soon everything that the limited facilities made possible had been done.

Under such conditions was born the idea of the Red Cross, composed of groups prepared to administer to, and ease the suffering of, the men of either side in time of war. But Dunant did not stop with the idea. His time, thenceforward, was devoted to having it adopted. Some leaders and governments were skeptical, some approved.

In 1863 his efforts bore fruit and an international conference was held at Geneva.

JOIN
200,000 DESTITUTE
EXTRA!
FLOODS RISE
PERISH
DISASTER
STARVING

From this came the establishment of the Red Cross. In honor of the man who had devoted his time to creation of the organization, the Swiss flag, a white cross on a red background, was reversed and designated as the international symbol of the newly-created armies of mercy.

Within five years 33 nations had organized Red Cross societies and were registered with the international committee at Geneva. It was not until 1882, however, that the United States government proclaimed its adherence to the convention. The year previous Clara Barton's efforts had resulted in the American Association of the Red Cross. The organization had already received its baptism, literally under fire, when it brought relief to the victims of forest fires that swept portions of the state of Michigan in the summer of 1881. Today every civilized country boasts a Red Cross society or its equivalent.

Since 1881 the Red Cross has expanded its service to a wide degree. They now include teaching first aid so that victims of accidents will receive proper emergency care pending arrival of medical assistance or removal to a hospital; classes in swimming and water life saving, as well as resuscitation of apparently drowned persons; public health nursing and instruction in home hygiene and care of the sick.

During the past year 4,905 Mississippians received first aid instruction, 654 qualified as Red Çross life savers, 992 received swimming instruction, and 319 persons in the state were awarded certificates for successful completion of the Red Cross course in home sanitation and care of the sick.

In another field, that of volunteer service, Red Cross workers produce hospital garments and surgical dressings and print books in raised type for the blind. Members of the Motor Corps carry children and other patients to orthopedic clinics and hospitals and collect and distribute clothing. Hot lunches are provided for school children by Red Cross canteen corps and trained Red Cross medical social workers are to be found in many government hospitals.

The service, however, that stands out in the public mind is Red Cross disaster relief. Many reasons contribute to this, not the least of which is the dramatic element of such operations.

The obligation to report the use of disaster funds entrusted to it, in the eyes of the Red Cross, is of equal importance to the responsibility of appealing to the public for such funds. Relying as it does upon voluntary contributions and gifts in time of national disasters, no other course could possibly be followed.

Strictest business methods govern all Red Cross financial policies. At the end of each fiscal year, and when closing operations on large disasters, such as the Ohio-Mississippi Valley floods of 1937, expenditures are audited by the Office of Finance of the United States War Department. This is a regular Red Cross procedure.

In the Ohio-Mississippi Valley disaster of 1937 to the end of the year the Red Cross spent a total of $24,803,713.97. More was spent for household goods than any other type of relief. This stood at $6,776,382.81. It included furniture, bedding, stoves, pots and pans, and other household articles.

The next largest item was for building and repairs. This was just about $1,000,000 under the top item, standing at $5,757,153.82. This included repairing homes, building houses, plastering, papering, and other expenditure necessary to restore buildings.

Illustrative of rehabilitation, is the case of Leavenworth, Indiana. When flood waters receded from the little town of 450 inhabitants, they left a scene of wreckage and destruction: 14 homes completely washed away; 42 swept off foundations; 65 homes and 16 business buildings damaged; and large amounts of clothing, household goods and business stocks lost. Only eight houses, the school and button factory, the largest source of employment in the town, remained untouched by the swirling waters. Into this picture of despair and destruction the Red Cross stepped. To make a long story short, the town was moved to the bluff above the river. The Red Cross obtained assurances of co-operation from the state and federal agencies. The state highway was relocated to go through the new town site. Money for streets, sewers, a water system, electricity and a town hall and other public buildings were assured by various governmental agencies. The Red Cross acquired the site, awarded lots and made grants for building 69 homes and several stores. In addition it granted awards for furnishing the homes. The old town site was zoned as a park to prevent future building.

JOIN!
Heed Their Appeal

The Red Cross, in undertaking this project, considered it an investment in disaster prevention. The town had averaged a flood approximately every eight years. Under the circumstances the expenditure was an investment from the financial standpoint, as well as the human.

Food, clothing and other maintenance, was the next largest item of relief costs, aggregating $4,772,907. This was followed by rescue, transportation and mass shelter, which totaled $3,209,057.67.

In order to see that Red Cross awards are justly made, and essential rehabilitation needs of each victim are met, the Red Cross employs trained family case workers. The practice is to borrow these from social service agencies, the Red Cross paying their accustomed salaries during the period of such employment.

Expenses and salaries of these workers and others charged with the welfare of distressed families aggregated $1,199,199.47.

Field supervision, including administrative expenses not allocated elsewhere, and such costs as accounting and audit expenses, office rent, telephone charges, warehousing of goods as well as their checking and transfer, and other expenses, amounted to $1,084,402.59. This was closely followed by medical and nursing aid, which totaled $928,381.79. During operations the Red Cross set up 315 field hospitals, employed 3,624 nurses, cared for 16,445 patients, and immunized 790,096 persons against disease and epidemic.

Agricultural rehabilitation was represented by an expenditure of $589,370.04. This included essential farm equipment, seeds and other materials to enable the farmer to resume work without loss of time, once the waters had receded. If a farmer was in the business of raising chickens and found himself unable to restock his farm, the Red Cross furnished a nucleus from which to start afresh. Cows, sheep, goats, horses and mules, were also supplied.

Families that had established themselves in some small business, such as shoe or watch repairing, and who found their equipment ruined by the flood, were also assisted in reestablishing themselves. Total expenditures for this were $457,671.03. All other relief expenses amounted to $169,187.75.

No Red Cross employee was authorized both to receive and expend contributions. This kept the channels of reporting and collecting contributions distinct from those reporting and paying commitments. During operations approximately 1,000,000 bills were paid by the Red Cross.

All Red Cross activities are supported from membership dues, voluntary contributions and gifts. The organization's ability to cope with disaster in a sense is directly reflected by its membership. The forthcoming annual Roll Call, when everyone is invited to join the Red Cross and thus have a part in the humanitarian work it is doing, begins Armistice Day and ends Thanksgiving.

SOUTHERN MEDICAL ASSOCIATION
NOVEMBER 15-18, 1938

Fifty years ago those pioneers who traveled across the verdant prairies of Oklahoma found a spot of land in the heart of that territory which looked so inviting that they returned home and implored their representatives in Congress to open it up for settlement. After much political agitation and futile attempts of "boomers" to move in without authority, a decree was finally passed permitting white settlers to enter this territory and develop it, beginning in 1889. On April 22nd of that year they were allowed to line up at the boundaries surrounding the unassigned lands of Oklahoma and exactly at noon a pistol was fired, permitting them to start running—a race which has gone down in history as one of the colorful events in the record of American civilization. The race went to the swift, and in order of arrival each man was permitted to choose the spot which he desired to claim as his own. Out of this historic contest was born Oklahoma City, which today is as modern and beautiful a city as can be found in America, proudly presenting public buildings, streets, parks, schools, and other advantages second to none.

This wonder city is unique in that it was one of seven in the United States which doubled its population between 1920 and 1930. In 1920 its population was 96,000; ten years later it was 185,000; and today as a result of its great oil fields and all the new people who come along with it, the figure is at least 225,000—possibly more. Oklahoma City was one of the new places in the United States which was not particularly injured by the depression. As long as two years after the Eastern cities had closed down their factories, established bread lines, written off numerous bankruptcies, and had settled down for a long period of starvation, Oklahoma City was going merrily ahead radiating optimism and doing business as usual. In 1931 and 1932 it began to feel the depression somewhat but even then it only lasted for a year and a half and was mild in comparison with other communities. This marvelous record was due to the fact that Oklahoma City's income is comprised of revenue coming from agriculture, industry, petroleum, dairying, and a wide variety of other activities, not to speak of the advantages of sunshine as bright and alluring as that of Los Angeles, land as rich as that of the Texas Black Belt, broad, open spaces as expansive as those of Kansas, and a citizenship whose courage knows no limitation.

During the past five years a new and beautiful Civic Center, surrounded by massive skyscrapers, bank buildings, parks, and other attractive structures, has been completed. Included in this group is the new Municipal Auditorium, which will accommodate the sessions of the Southern Medical Association in November. Surrounding the city on the south, east, and north lies the great oil field, which was first discovered just before the depression and which today is the second largest in the world. This field is constantly being extended and now presents practically an unbroken series of wells for a distance thirty miles long and six miles wide, beginning fifteen miles south of the city and extending fifteen miles northward. The first wells which were drilled in this field are still producing; and new ones are constantly being discovered, thus assuring a source of income for many years in the future.

Those who have not previously visited this city will be agreeably surprised at its beautiful streets, great department stores, and splendid shopping facilities. In contrast with some of the larger cities in the United States, all these advantages are located within a few blocks of each other and are on level ground, thus a visitor is not forced to become footsore and weary as he seeks what he likes.

Eighteen miles to the south lies beautiful Norman, in which is located the State University. Only one other institution in the Southwest is comparable to it in size and quality of work, and it annually enrolls many thousands of students from all over this part of the United States. Its degrees are accepted everywhere, and its students are making good in all walks of life in every part of the earth. The Medical Department of the University is located in Oklahoma City, comprising a four story medical school building, University Hospital, Crippled Children's Hospital, a Dispensary and Nurses' Home, occupying approximately two blocks of ground. There are more than eight hundred hospital beds, and the Dispensary daily serves three to four hundred patients. The faculty of the school includes more than one hundred of the leading physicians and surgeons of Oklahoma City and its graduates are recognized as capable men where ever they go.

Make up your mind to come to this meeting of the Southern Medical Association on November 15th and to the 18th. You will find not only Southern hospitality but you will find Western frankness and friendliness. You will meet your friends from all over the South, and you will get the spirit of the West as well as enjoy an outing which you have seldom been privileged to enjoy before. There will be alumni banquets for the graduates of every school of any size or prominence, and you will probably run across friends whom you have not seen for twenty or thirty years. The attendance for this meeting bids fair to break all records, and you cannot afford to miss it. We will be looking for you with open hearts and outstretched hands.

—The Oklahoma County Medical Society.

TO THE EDITOR

Dr. W. H. Anderson, Editor
The Mississippi Doctor,
Booneville, Miss.

My dear Dr. Anderson:

A cordial invitation is extended to you, to the members of the Council of the Southern Medical Association, and to each President, President-Elect, Secretary and Editor of the State Associations in the territory of the Southern Medical Association to attend and participate in a Conference of distinguished medical leaders to be held in the Oklahoma Biltmore Hotel, Oklahoma City, Tuesday, November 15th, at 6. p. m.

The idea of having this Conference at the time and place of the meeting of the Southern Medical Association is to furnish an opportunity for the leaders of our profession to get together for an exchange of ideas and a discussion of the problems of the profession at a time most convenient and profitable to all. The problems confronting the profession and organized medicine of which you are a leader, are many and your responsibility, especially at this time is very great. The discussions at this Conference and your attendance of the meeting of the Southern Medical Association will help you meet your responsibility to the profession of your state.

A committee of seven selected to represent the American Medical Association and a like committee to represent the government are attempting to work out a satisfactory plan for more adequate medical care. Dr. Irvin Abell, President of the American Medical Association and Chairman of this Committee, and other prominent medical leaders will address this conference.

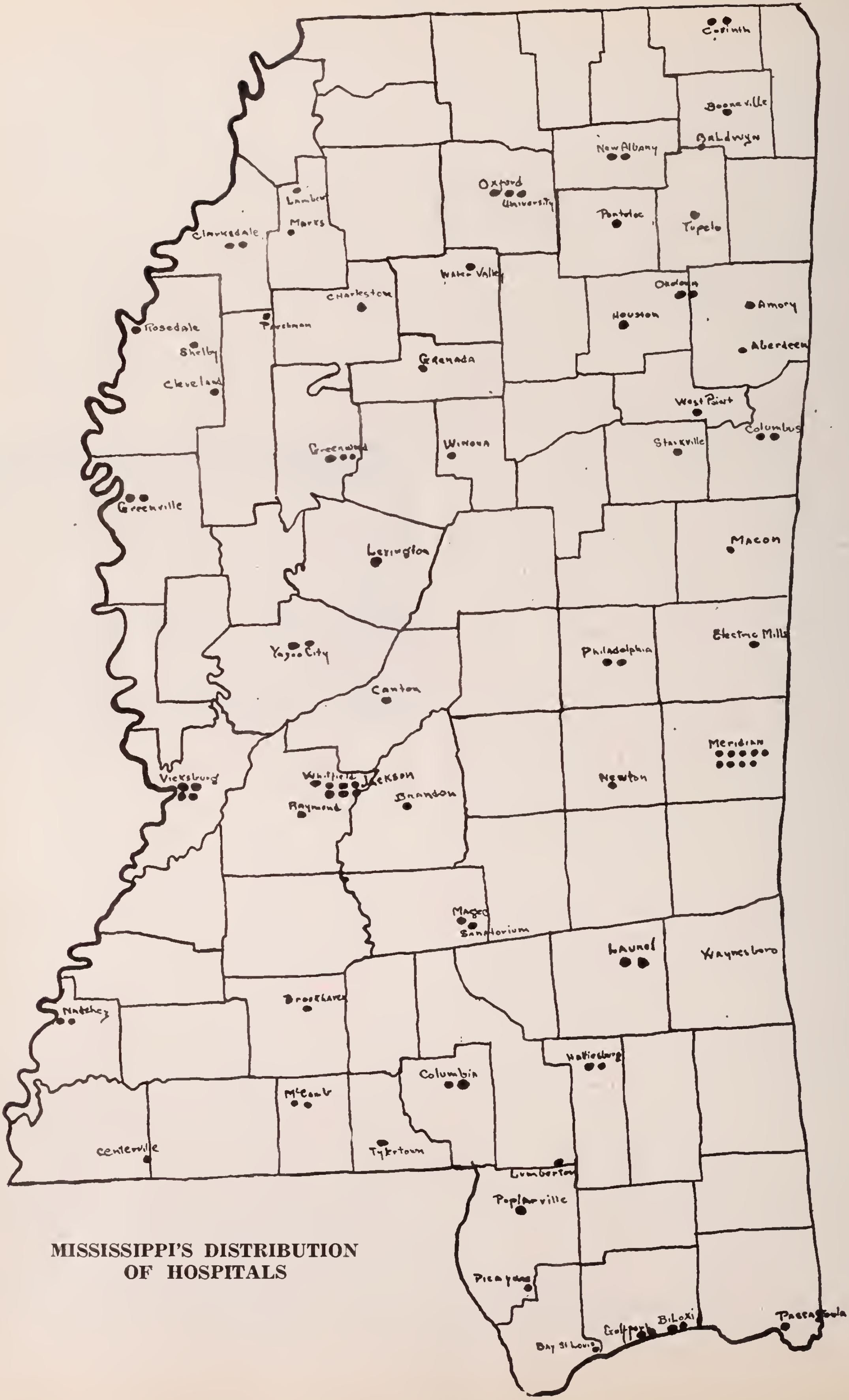
You are also invited to be the guest of the Southern Medical Association at a Dinner given in your honor at the time and place of the Conference. The Members of the Council of the Southern Medical Association will represent the Association and act as Host at the Dinner.

If for any reason you are unable to attend, please select some outstanding medical leader from your state to represent you personally at this Conference and send me his name and address so that I may extend him an invitation to be present and participate in the conference. A program of the conference is enclosed.

Looking forward with anticipated pleasure of seeing and greeting you at the Conference, I am,

Sincerely and fraternally yours,

Harvey F. Garrison, Chairman.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MISSISSIPPI'S DISTRIBUTION
OF HOSPITALS

OUTLINE OF THE HOSPITAL COMMISSION LAW OF THE REGULAR LEGISLATIVE SESSION OF 1936, SENATE BILL NO. 223, CH. 178

A Hospital Commission is created, composed of 5 members, four appointed by the governor—one from each supreme court district, one from the state at large—and the governor is the fifth member.

This Comission is authorized to employ an accountant-secretary and other necessary help, and pay for same out of appropriation for indigent sick, not in excess of 2 per cent of the year's appropriation in one year.

It is made the duty of this Commission to establish uniform rates for treatment of indigent sick, within the limit of $2.50 per day for hospitalization, $7.50 for operating room and supplies for major, and $2.50 for minor operations; to make rules and regulations for carrying out this purpose; to make rules and regulations for obtaining any federal funds made available for this purpose; to lay down rules setting standards to be met by hospitals qualifying to do work in treating indigent ill; inspect hospitals and certify the qualifications of each hospital proposing to come under the act; to supervise work of state charity hospitals; to designate certain territory to be served by state charity hospitals; to revoke permits issued to hospitals or for hospitals. The commission is prohibited from placing in the zone of a state charity hospital a county where a qualified hospital is or shall be located.

The governor is authorized to appoint members from the county or adjoining counties to the counties in which a qualified hospital is located to serve as a board of trustees. This board is composed of 3 members. The board of a county-owned or a municipally-owned hospital shall serve as the board for this purpose. The duty of this board is to see that the benefits of this act shall only apply to persons who have been bona fide residents of the state for 6 months and who are unable to provide for their own care, etc.; to make monthly reports to the State Hospital Commission of the number given hospital service in their county or counties during the preceding month, and for which compensation is sought, giving the names and addresses of such patients, date of admission and discharge of each such patient, and an itemized statement of each patient's account, and send an eligibility certificate with each patient's account; to visit and inspect all hospitals in their territory, once each month, to see if the charity patients are properly cared for, and report complaints, if meritorious, to State Comission; to lay down necessary rules and regulations necessary to protect the patients and charity fund, and to insure an equitable distribution of the charity funds in each county and district.

The Act provides for a disbursement of all per capita charity appropriations to the counties and districts on the basis of population.

In order to qualify for assistance under this act it is necessary that a person secure a certificate of a reputable physician and two residents of good character of the county in which the applicant resides that the applicant is eligible for assistance under the act. Incases of emergency where it is not practicable to secure a certificate before admission, the hospital may receive and care for such person, and secure a certificate later.

No compensation is provided for services of members of the State Commission, and none for members of county or district boards of trustees.

Compensation to qualifying hospitals is made from a charity hospitalization fund appropriated by the legislature.

APPROPRIATION

By House Bill No. 526, Chapter 65, Laws of Regular Session of 1938 the Legislature appropriated to the per capita part of the fund the sum of $500,000.00

To South Miss. Charity Hospital	57,500.00
To Matty Hersee Hospital	57,500.00
To Jackson Charity Hospital	57,500.00
To Vicksburg Charity Hospital	52,500.00
To Natchez Charity Hospital	52,500.00
Total to Charity Hospitals	$277,500.00
Grand Total to Charity Fund	$777,500.00

This for the biennium beginning July 1, 1938.

This amounts to approximately $00.386 per person, or 18.3 cents per year per person in the state, considering the population the same as given in the federal census of 1930.

MEDICAL SCHOOL GETS BOOKS

Dr. Rowland announces that during the past month he has received for the library of the "Ole Miss" Medical School, one of the finest private medical and surgical libraries in the state, that of the late Dr. J. A. K. Birchett, of Vicksburg. It consists of more than five hundred volumes of medicine and surgery, and some four hundred copies of valuable journals, and was donated by Dr. Birchett's son, Dr. J. A. K. Birchett, Jr., of Vicksburg, an alumnus of the school, class of '17.

He is also pleased to announce that he has received from Dr. John D. MacKellar, of 1377 East 63rd Street, Chicago, a gift of more than two hundred fine volumes of medical and surgical books.

Three thousand volumes of valuable works have been added to the library since June 1.

Dr. Rowland is doing a great work for the medical school at Ole Miss. A great and noble character is he. He is a living example of our philosophy, "If a man keeps mentally and physically fit he should be worth more to human society every day he lives, though he live to be a full hundred."

—PROGRAM—

Conference of Presidents, Presidents-Elect, Secretaries and Editors of the State Medical Associations—

SOUTHERN MEDICAL ASSOCIATION
Tuesday, November 15th, 1938
Main Dining Room
OKLAHOMA BILTMORE HOTEL
Oklahoma City
Social and Refreshments, 6 P. M.
—Dinner, 6:30 P. M.

Conference Immediately Follows the Dinner

Essays and discussions of the following subjects will be opened by the individuals indicated. Each essayist will be limited to ten minutes. The Conference will then be turned into round table discussions on any topic or questions of interest which any member may care to present. Discussions limited to five minutes.

Greeting from the Oklahoma State Medical Association.—Dr. W. K. Speed, President.

Greetings from the Southern Medical Association.—Dr. J. W. Jervey, President.

1. "Trends in the Practice of Medicine and Medical Leadership."—Dr. Harvey F. Garrison, Chairman Conference.

2. "The National Health Conference."—Dr. Irvin Abell, President, American Medical Association.

3. "The apparent Need for More Adequate Medical and Hospital Care."—Dr. Felix J. Underwood, Mississippi State Health Officer, and Dr. W. H. Anderson, Editor, THE MISSISSIPPI DOCTOR.

4. "Some Suggestions for Increasing Membership in the State Associations."—Dr. Arthur T. McCormack, Secretary, Kentucky State Medical Association.

5. "How Can the Members of This Conference Best Serve Medicine in the Light of Recent Events?"—Dr. Edward H. Carey, Dallas, Texas.

Round Table Discussions.—Members of the conference or guests are cordially invited to initiate subjects for discussion or ask any questions immediately following the last essayist.

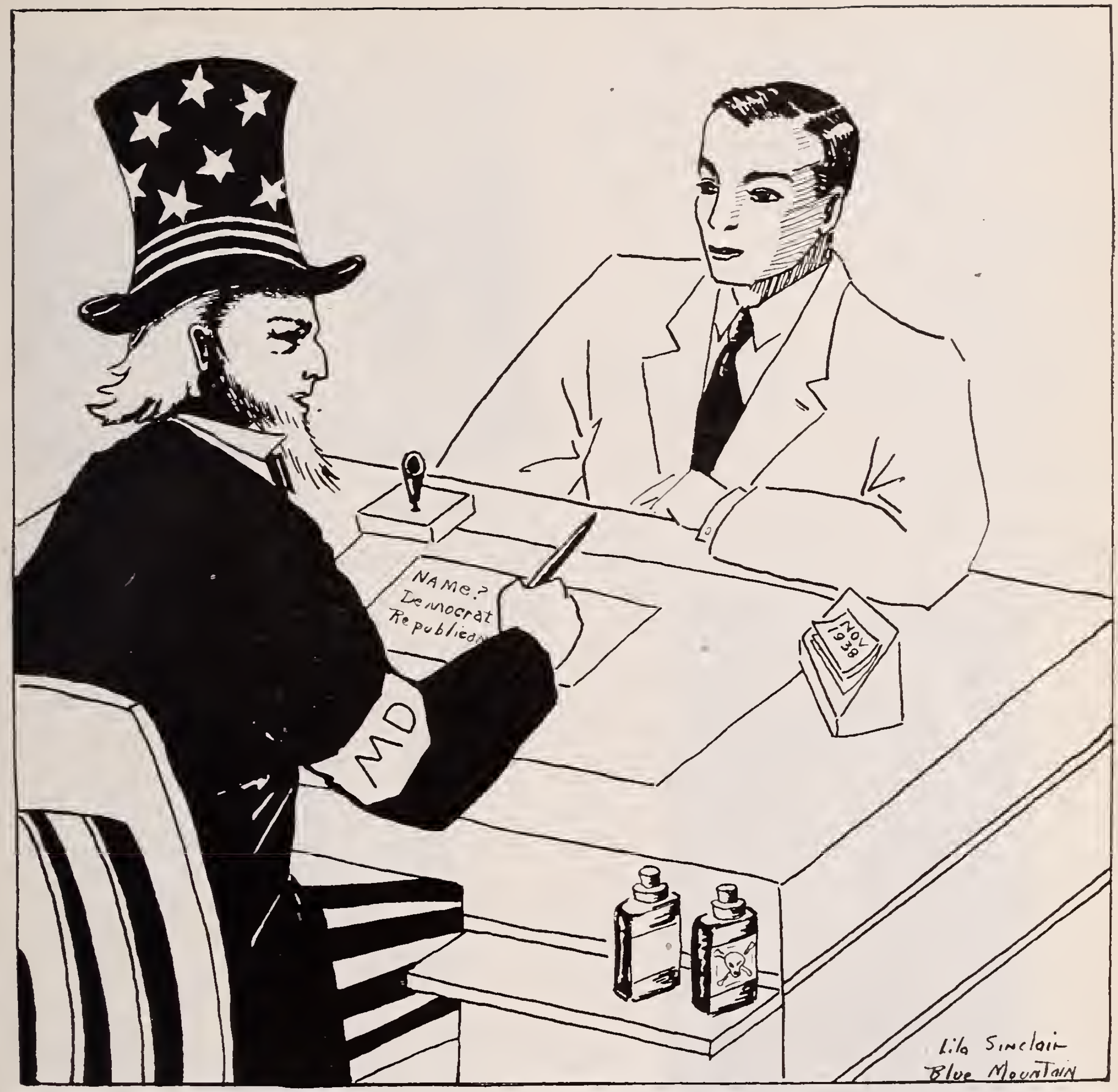
* * *

The presidents, presidents-elect, secretaries and editors of each state medical association in the territory o fthe Southern Medical Association are cordially invited and earnestly requested to attend this Conference and Dinner. One hundred per cent attendance, either in person or by representative, has been assured. If for any reason you or your appointed representative should find it impossible to attend, please wire the name and address of substitute.

Harvey F. Garrison, M.D.
Conference Chairman, Jackson, Miss.

DR. DAVID E. GUYTON

Dr. David E. Guyton of Blue Mountain College, Poet for THE MISSISSIPPI DOCTOR, whose life and work was recently featured in HOLLAND'S Magazine.



Personnel and Topics for Discussion for the Program of the

CENTRAL MEDICAL SOCIETY

Tuesday, December 6th, 1938
10 a. m. to 10 p. m.
Robert E. Lee Hotel
Jackson, Mississippi
Program Presented by **Baylor University School of Medicine**

Dr. C. R. Hannah, Professor of Obstetrics:

1. Diagnosis and Management of Post-Occipital Position.
2. Toxemias of Pregnancy with Related Hypothyroidism.

Dr. H. M. Wimans, Professor of Medicine—

1. Coronary Occlusion.
2. Treatment of Hypertension.

Dr. Hugh Leslie Moore, Professor of Pediatrics:

1. Pediatric Diagnosis.
2. Common Allergic Disorders in Childhood.

Dr. W. B. Carroll, Prof. of Orthopedic Surgery:

1. Fractures Involving the Ankle Joint.
2. Osteomyelitis.

Dr. C. L. Martin, Professor of Radiology:

1. New Developments in Treatment of Cancer With Radiation.
2. A Study of Fallopian Tubes in Sterility.

Dr. A. I. Folsom, Professor of Urology:

1. Pyelitis in Children.
2. Pyelitis in Pregnancy.

Dr. Bedford Shelmire, Prof. of Dermatology and Syphilology:

1. The Handling of the Common Skin Diseases in Private Practice.

2. Discussion of the Eczema Problem — Its Causes and Treatment(Lantern Slides).

Surgery—To be selected.

Eye, Ear, Nose and Throat—To be selected.

Round Table Discussions Will Be Held On The Following Subjectss

The Following Subjects:

1. (a. Obstetrics
   (b. Genito-Urinary
2. (a. Medicine
   (b. Pediatrics
3. (a. Surgery

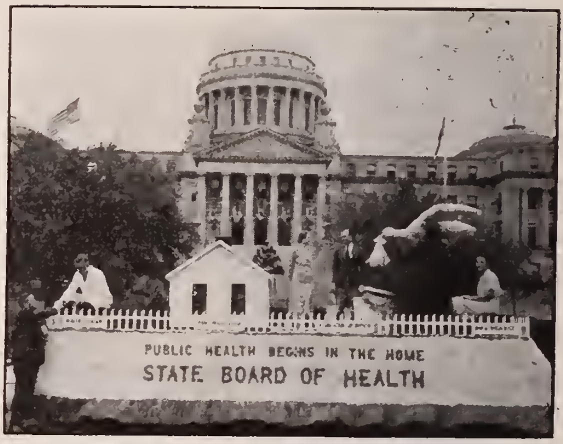
   Round Table Discussions Will Be Held On
   (b. Orthopedics
4. (a. X-Ray
   (b. Dermatology
5. (Eye, Ear, Nose, and Throat.

The entire medical profession of the State of Mississippi is cordially invited to attend this meeting and participate in the discussions.

DR. SEALE HARRIS

Dr. Seale Harris of Birmingham, Ala., President of the Alabama State Medical Association; the founder of the Southern Medical Journal, and past president of the Southern Medical Association. He is able in his chosen specialty and as he applies expert knowledge, he is not unmindful of the human organism in its entirity, its physical needs, its mental possibilities, and its soul power. He is an outstanding constructive leader in Christian citizenship.

PUBLIC HEALTH MARCHES ON



The beautiful float of the Mississippi State Board of Health pictured above was awarded the silver loving cup below as second prize in the Health and Welfare parade of the Mississippi State Fair, in Jackson, October 12.

Dr. Felix J. Underwood was Chairman of Health and Welfare Day at the Fair and the parade on this occasion, composed of floats of numerous health and welfare agencies in the state, was considered outstanding in every respect.

ADDITIONAL MID-SOUTH SPEAKERS

Dr. R. A. Kinsella of St. Louis. (Med.)

Dr. Howard C. Naffziger, San Francisco, Calif. (Neuro-Surg).

Dr. George R. Herrmann, Galveston, Texas, (Med.)

Dr. D. M. Lierle, Iowa City, Iowa (E. N and T.)

Dr. Wm. P. Healey, N. Y., N. Y., (Gyn.)

Dr. A. W. Allen, Boston, Mass. (Surg.)

Dr. E. B. Shaw, San Francisco, Calif. (Ped.)

Dr. F. W. Rankin, Lexington, Ky., (Surg.)

Dr. L. J. Menville, New Orleans, La. (Radiol.)

Dr. Soma Weiss, BostonCity Hospital, Boston, Mass. (Med.)

Dr. Anthony Bassler, 784 Park Ave., New York, N. Y. (Med.)

Dr. Maurice C. Pincoffs, University of Maryland, Baltimore, Md. (Med.)

Dr. A. M. Snell, 102 Second St., S. W., Rochester, Minn. (Med.)

Dr. John H. Musser, 1430 Tulane Ave., New Orleans, La. (Med.)

This leaves only one pediatrician and one surgeon to be heard from. The latter will probably not be selected before Dr. Crisler attends the Congress of Surgeons in November.

You will note from the above that Dr. Cooper has been very active as usual in securing the very best men available for the Mid-South. Make your plans now to attend the entire meeting. The Mid-South offers a great treat to the medical profession of this section.—Ed.

NORTH MISSISSIPPI MEDICAL SOCIETY

Dr. A. J. McIlwain, Vice-president
Dr. A. H. Little, Secretary
Division of Medical Extension,
Tulane University of Louisiana:
Dr. M. E. Lapham, Director

Under the above auspices the following program was given at Oxford, Miss.:

Program

WEDNESDAY, NOVEMBER 9

A. M.
10:00 Tumors of the Larynx, Dr. F. E. LeJeune
10:40 General Diagnosis of Syphilis Dr. B. J. DeLaureal
11:20 Thrombophlebitis, Dr. Alton Ochsner.
P. M.
12:10 Business Session.
12:30 Luncheon—University of Miss. Cafeteria
2:00 Skin Manifestations of Syphilis, Dr. M. T. Van Studdiford
2:40 Present Day Conception of Uncomplicated Retroversion, Dr. H. W. Kostmayer
3:20 Peripheral Vascular Disease Dr. Alton Ochsner
4:00 Estrogenic Principle and Its Clinical Application, Dr. C. G. Collins.
4:40 Syphilis Complicating Pregnancy Dr. M. E. Lapham
6:00 Banquet—University of Miss. Cafeteria
7:30 Hoarseness, Dr. F. E. LeJeune

THURSDAY, NOVEMBER 10

P. M.
7:00 Pathology of Syphilis, Dr. B. J. DeLaureal
Interpretation of Laboratory Tests for Syphilis, Dr. B. J. DeLaureal.
7:45 Diagnosis and Treatment of Early Syphilis, Dr. M. T. Van Studdiford
8:30 Syphilis of Circulatory and Nervous Systems, Dr. B. J. DeLaureal.
9:15 Drug Reactions in Treatment of Syphilis, Dr. M. T. Van Studdiford.

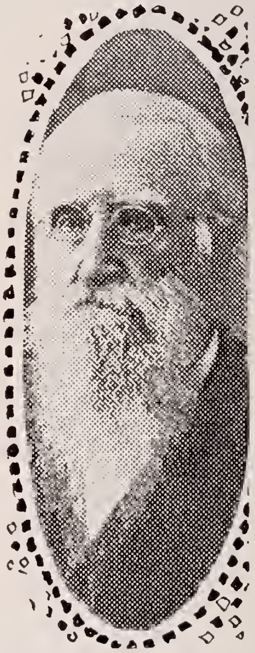
DR. CHARLIE M. MURRY

Dr. Charlie M. Murry, of Ripley, Miss., has been very active in practice in his own home town for forty-eight years. He is now three score and ten in years, but in physical and mental activity and efficiency does not appear to be one year more than fifty. He loves the practice of medicine and his heart is always sympathetic with the ones who need help. He has a wonderful memory and from his long and rich experience in the practice he has several volumes of valuable medical history that should be recorded in book form. Dr. Murry used the first antitoxin against diphtheria that was used in his county and the first inoculations against typhoid. He was deeply impressed with their value from the beginning and states now that, "During the whole period of my practice I have been more impressed with the possibilities of preventive medicine than from all results from all methods of treatment; even giving due credit to the surgical improvements and results." Dr. Murry tells of operating on a 78-year-old man for strangulated hernia without any help except another doctor to give the chloroform back in 1898; the operation was successful and the man lived seven more years. In 1900 he carried a patient to St. Louis for an x-ray picture which was supposed to be the first x-ray laboratory in the west. It took four days to get the picture, but now we get impatient if we wait over thirty minutes. He burst into inspirational enthusiasms when discussing the progress made against typhoid fever. As county health officer he rarely sees a case now, but in his early practice he had whole families taken by the disease. Dr. Murry was a delegate to the Yellow Fever Convention held in Atlanta in April, 1898, and at this convention the first suggestion was made that the mosquito might be the means of transmission of the disease.

Dr. C. M. Murry joined the State Medical Association as soon as he began practice and has been a regular attendant ever since. He was a member of the State Board of Health from 1896 to 1900. He has served one or two terms as vice-president of the association. He has been county health officer for many years at different times and holds that position now.

Dr. C. M. Murry joined the State Medical Association as soon as he began to practice and has been a regular attendant ever since. He was a member of the Miss. State Board of Health from 1896 to 1900, and served one term as vice-president of the state association. He has been county health officer for many years and holds this office at present. He did his very best day's work when he married Miss Hattie Neblett of Iuka, the daughter of Rev. I. A. Neblett, a Methodist minister. She attended Grenada College and is a woman of fine poise, Southern culture and is a true helper and a home builder.

For more than ninety years now there has been a member of the Murry family in active practice in Ripley. Dr. Charlie is the son of Dr. John Y. and Mary Miller Murry who came from West Tennessee about 1835. John Y. Murry was an outstanding character in North Mississippi for many years. He did active practice in Ripley for about sixty years. He died in 1915. He was not only a leader in medicine, but active in church, fraternity and civic affairs. He served as Grand Master of the Grand Lodge two years in succession, served as president of the State Sunday School Convention one year, during the Civil War was Captain of the 34th Mississippi Regiment, and before the war held a term as county treasurer and one as sheriff of Tippah County. His wife was the daughter of the founder of the Methodist Church at Ripley. He was active in all human affairs until his death at '86.



Dr. John Y. Murry who died in 1915 after more than sixty years in active practice.

Dr. Charlie Murry had a half brother, Dr. Will, who practiced at Dumas in Tippah County for many years and later at Ripley. He served one term as State Treasurer. Two of his daughters married doctors, Miss Emily to Dr. T. L. Randolph, and Miss Pattie Etta to Dr. R. M. Adams. Dr. Adams recently passed to his reward, at the time of his death the president of the North Mississippi Medical Society and the Mid-South Postgraduate Medical Assembly. His son, Dr. Milton Adams, graduated from Tulane, was for several years connected with the Anderson Clinic at Booneville and is now doing plastic surgery in Memphis. Another son, Lorenza, will graduate in medicine next year from the University of Tennessee.

We are grateful to the Murry family, the Murry connection, for their contribution to medicine. We wish for Dr. Charlie at least another score of happy and successful years in the profession to which he is so devoted.

OFF FOR OKLAHOMA

Fair Oklahoma City,
In youth and beauty's pride,
With thrilling hearts, we're thronging
to you from every side.

We doctors down in Dixie
Delight on every hand
To join in jubilation
With you in Wonderland.

The lure of all your legends,
The magic of your marts,
The tug of your traditions
Lay hold upon our hearts.

The lilting of your laughter,
The splendor of your smiles,
Your witchery of welcome,
Across the miles and miles.

The merit of your manhood,
Your women's winsome ways
The gladness of your boys and girls,
Your every fetching phase.

All these, like hands that beckon,
All these and millions more,
Are reaching, clasping, calling,
From shore to magic shore.

Thank God for such a city
Where Southern Medicoes
May hold their high convention,
Complete from first to close.

We're off for Oklahoma,
A thrilling, milling throng.
Come, join us Dixie Doctors
And swell our marching song.

Hail, Oklahoma City,
Till death shall intervene,
We'll pay you proud allegiance
And crown you for our Queen.

David E. Guyton,
Blue Mountain, Mississippi

Written for THE MISSISSIPPI DOCTOR by request of the Editor.

FROM DR. P. W. ROWLAND

Just want to tell you what the doctors and widows of doctors in the state have been doing for our Ole Miss Medical Library during the past six weeks. You will recall that in my address to the State Medical Association in Meridian last year (May 9, 1937) anent this subject, I said it was certainly an experiment, but I had the hardihood to try it, even though I had reached, and passed, the age at which Osler said, "a man should be chloroformed."

Well, the year closing May 31, 1938, proved that the experiment was worthwhile, since we added to the library books and periodicals worth, at least, eight thousand dollars.

When school closed in June, dreading the inactivity usually accompanying a vacation of three months, I concluded I would get in a car and visit some of my doctor friends and see what I could do in the way of collecting, from their libraries, such old books as they were no longer interested in, and such new ones as they were willing to contribute. I did this with considerable trepidation, because I realized I could very easily make myself a nuisance in my contacts, since most good doctors are busy, and do not like to be interrupted.

I want to tell you now that I no longer have this fear. The wonderful kindness, and generous treatment, with a real eagerness to co-operate with and help me, have banished all such feeling, and I fully realize now that I am on a program tremendously worthwhile.

During the past six weeks Dr. Looper, Chairman of the Library Committee, and I (I did all the talking and the doctor all the work) have made ten trips to places within a radius of one hundred sixty miles of Oxford. As a result of those trips we have placed in the library thirteen hundred books, all in good condition, and dating from the year 1772 to 1938. I do not know the money value of these books, but it is more than several thousand dollars, and I do know that we are building a library for the medical school and for the medical profession of Mississippi. Some four hundred more have been promised.

The doctors of the state, and the widows of deceased doctors, whose names appear below, have contributed these volumes.

I want the doctors of the state to know that any book in good condition, no matter how old, will be gladly accepted. There are thousands of them in the state, in attics, cellars and closets, going to waste. I want to preserve them, and, incidentally, establish a perpetual memorial to any person who may see fit to make the donation.

In addition to these books, the alumni of the medical school have contributed, during the past two months, five hundred dollars per year, for a period of four years, this fund to be solely for the purchase of new books.

I expect this fund to reach one thousand dollars before the close of the year.

Yours,
P. W. Rowland, M.D.,
Field Director.

CONTRIBUTORS OF BOOKS

Mrs. E. H. Galloway, Jackson, Miss.
Frank P. Smith, Fort Worth, Texas.
W. H. Anderson, Booneville.
L. L. McDougal, Sr., Booneville.
W. W. Strange, Booneville.
C. M. Murry, Ripley.
J. I. Mayfield, Blue Mountain.
C. M. Speck, New Albany.
S. E. Eason, New Albany.
T. H. Rayburn, Pontotoc.
R. P. Donaldson, Pontotoc.
G. G. Armstrong, Houston.
Mrs. J. A. Evans, Houston.
Mrs. J. S. Evans, Houston.
Mrs. N. W. Nanney, Dorsey.
W. C. Walker, Houlka.
J. M. Anderson, Sardis.
Mrs. Edwin Wright, Sardis.
J. G. Pou, Courtland.
S. L. Cox, Water Valley.
G. A. Brown, Water Valley.
E. A. Thorne, Holly Springs.
R. G. Grant, Holly Springs.
E. G. Martin, Benoit.
Seale Harris, Birmingham, Ala.
J. F. Armstrong, Jackson.
J. F. McIntosh, Jackson.
S. H. McLean, Jackson.
H. R. Shands, Jackson.
Mrs. W. W. Smithson, Jackson.
H. F. Garrison, Jackson.
Cecil Rhodes Walley, Jackson.
Willis Walley, Jackson.
W. E. Noblin, Jr., Jackson.
W. B. Dodson, Jackson.
L. B. Neal, Jackson.
P. W. Rowland, University.
W. A. Johns, Corinth.
Mrs. Lester Greer, Potts Camp.
F. C. Spalding, West Point.
J. S. Donaldson, Oakland.
A. V. Murry, Greenville.
J. J. Noto, Baton Rouge, La.
J. V. May, Port Gibson.

BROADER PROGRAM NEEDED TO STAMP OUT SYPHILIS

An expanded public health program carrying an appropriation of at least $25,000,000 annually for ten years for venereal disease control would stamp out syphilis in this country as it has already been stamped out in Sweden. Such is the prediction of Philip S. Broughton, United States Public Health Service, in *Behind the Syphilis Campaign,* published today by the Public Affairs Committee, 8 West 40th Street, New York City.

This cost is contrasted with the small amount now being spent in syphilis control activities, as well as the much larger amount now spent to repair the damage done by the disease. Public expenditures for the care of the victims of the disease are shown to be at least $41,000,000, or more than the amount needed to stamp it out. In addition to public expenditures, syphilis costs huge but unknown sums in medical bills, disability, and premature death.

Special stress is placed on the recent progress which has been made in coping with the disease. It was not until 1934, the pamphlet points out, that "we were able for the first time to say how much syphilis there is in the United States. In 1935 we were able to say for the first time just how effective modern treatment is and to recommend a standardized and highly perfected system of treatment. In 1936 the tests for the laboratory diagnoss of syphilis were brought to a new perfection."

Industry is urged, in its own interest, to cooperate in protecting the health of its workers. Infected employees should in no case be discharged to spread disease in the community. Unless competent treatment can be arranged through private physicians, at prices the workers can afford, it is recommended that industrial medical services treat syphilis, such treatment being extended as part of the regular medical services. Similar co-operation is sought from labor unions.

Instead of utilizing the old-fashioned, dubious appeal of fear, the present-day campaign against the disease strives to inculcate confidence. To this end it promises a high degree of success if the following eight-point program formulated by an advisory committee of the U. S. Public Health Service is carried out:

1. A trained public health staff in every community headed by a full-time medical officer.
2. The reporting of all cases and vigorous follow-up where treatment has lapsed.
3. Adequate treatment facilities which provide the best of modern treatment for all, including those who cannot afford to pay.
4. Adequate laboratory facilities which will perform the blood test free for physicians and clinics.
5. Free antisyphilitic drugs to all physicians and clinics.
6. Medical certificates, including a negative test before marriage.
7. The inclusion of a blood test as a part of every routine physical examination.
8. An educational program aimed at the age groups which most frequently acquire syphilis.

Behind the Syphilis Campaign is the twenty-fourth in a series of factual ten-cent pamphlets on current problems published by the Public Affairs Committee of New York City.

FROM OLE MISS MEDICAL SCHOOL

The University of Mississippi Medical School opened its regular session on September 23, with a total registration of 48 in the freshman and sophomore classes.

The following Freshmen are registered: John Willis Evans, Jackson; E. F. White, Houston; Edwin Brooks Werkeiser, Philadelphia; Chas. Baldwyn Mitchell, Jr., Starkville; George Spencer Barnes, Belzoni; David W. McLean, Meridian; Geddes Boardwell Flagg, Jr., Gulfport; Marion Walter Lathram, Macon; Lee Rogers, Jr., New Albany; Alex Gordon, Jackson; Sam Cooke Suggs, Calhoun City; Joseph Lorenzo Wilson, Colorado Springs, Colo.; Wm. Chas. Warner, Grenada; Arthur Cleveland Davidson, Greenville; Wm. Edwards Sheffield, Jackson; John Andrew Langston, Newheborn; Jim Gilbert Hendrick, B.S., Lena; Harold Milton Robertson, Corinth; Robert Shirrell Rogers, Jackson; Ellie Drane Parker, Laurel; Joseph Marion Garrett, Bay Minette, Ala.; David Haley, Utica; John Sharp Ewing, Jr., Vicksburg; Robert Killian Royce, Isola.

The annual meeting of the Association of American Medical Colleges, of which our school is a member in good standing, will be held October 24-26, in Syracuse, New York. Dean Guyton, Dr. Walton, and Dr. Buchannan plan to attend the meeting.

Miss Ross Jeffries, librarian of the Rowland Memorial Library, makes the following announcements:

Books and monographs may be borrowed for two weeks with the possibility of renewal for two weeks, provided the borrower will pay postage both ways. A reprint file was begun in 1937 and is kept up to date. Requests for reprints can be filled either by author or subject. Duplicate copies of the A. M. A. J. from 1933 are on file and can be borrowed as single numbers. Copies of a few other journals are also available as single numbers.

New Books

Cecil: *Textbook of Medicine,* 1938

Carrell and Lindburg: *Culture of Organs,* 1948.—(Describes the technique of the cultivation of whole organs in the Lindburg pump).

Fantus: *Technique of Medication,* 1938.

Harvey Lectures: 1931-32; 1935-36; 1936-37:—

Contents for the 1936-37 volume are:

The Cerebral Cortex and Consciousness, Dr. Wilder Penfield, Professor of Neurology and Neurosurgery, McGill University, Montreal; The Passage of Fluid Through the Capillary Wall, Dr. Eugene M. Landis, Robinette Foundation, Hospital of the University of Pennsylvania; Some Functions of the Hypothalamus, Dr. S. Walter Ranson, Professor of Neurology and Director of Institute of Neurology, Northwestern University Medical School; The Investigation of Intermediary Metabolism with the Aid of Heavy Hydrogen, Dr. R. Schoenheimer, Assistant Professor of Biological Chemistry, College of Physicians and Surgeons, Columbia University; The Scientific Work of the Health Organization of the League of Nations, Dr. Thorvald Madsen, Director, Serum Institute, Copenhagen, Denmark; The Control of Excitation in the Nervous System, Dr. Herbert S. Gasser, Director, Rockefeller Institute, for Medical Research; The Influence of the Pituitary and Adrenal Glands Upon Pancreatic Diabetes, Dr. C. N. H. Long, Professor of Physiological Chemistry, Yale University; Transmission of Nervous Effects by Acetylcholine, Sir Henry Dale, Director, National Institute for Medical Research, London England.

Kato: *Theory of Decrementales Conduction* *in Narcotized Region of Nerve,* 1924.

Kato *Further Studies in Decrementales,* 1926.

Merc: *Manual of Therapeutics and Materia Medica,* 1934.

Tilney and Riley: *Forms and Functions of the Central Nervous System,* 3rd ed., 1938.

Sherman: *Chemistry of Food and Nutrition,* 1937.

Underwood and Whitfield: *Medical Licensure,* 1798-1937.

BOOK REVIEWS

The sick child usually constitutes a greater nursing problem than a medical problem. Miss Gladys Sellew has completely revised her *Pediatric Nursing* under a new title, *The Child in Nursing.* With the assistance of Dr. A. Graeme Mitchell this valuable book is brought up-to-date, several chapters being prepared by eminent pediatric specialists. Miss Sellew strikes at the heart of her subject when she says she presents her materials "from the point of view of the well child, keeping in mind that the nurse is interested not only in diseases but also with the child's total well-being and his physical and mental development." She tries to help the student nurse to *understand* children—both sick and well, and her instruction includes a long and observing experience with children. She begins her practical discussions with the child's pre-natal health, takes up his normal development from infancy through early childhood. Feeding, hygiene and routine methods are included. Nutritional, deficiency and contagious diseases, and all conditions encountered in child nursing are given detailed attention. Published by W. B. Saunders Company, Philadelphia, Price $2.50.

Essentially a text book for students, *Practical Microbiology and Public Health* combines to an adequate working degree the practical aspects of both bacteriology and public health. The book, aside from its usefulness for the medical student, is practical for the general public health or laboratory man as well. The author, Dr. William B. Sharp, professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas, organizes, interprets and systematizes the data required for laboratory and field records. The bacteriologic exercises are taken from his *Medical Biology.* Tables and experiments follow the more standard procedures. Because of the increased emphasis in recent years on public health, the laboratory, field work and surveys offer valuable aid, supplemented by a schedule for public health office problems. The last section of the book deals with animal parasites and disease vectors. Published by C. V. Mosby Co., St. Louis, Mo. Price $4.50.

The second edition of the *Practice of Medicine* by Jonathan Campbell Meakins, Professor and Director of the Department of Medicine, McGill University, Montreal, Canada, is just off the press. It is published by the C. V. Mosby Company St. Louis. A book of more than fourteen hundred pages, it is not planned for the specialist nor intended as an encyclopedia, but as an aid to the medical student and the practitioner. It contains 521 illustrations, including forty-three in colors. Dr. Meakins believes that the bedside, the laboratory and the postmortem table should be utilized in establishing diagnoses and determining medical procedures. In his second edition Dr. Meakins has changed some illustrations, omitted others and introduced many new ones. In his introductory he discusses the approach to the patient, symptomatology, etiological factors in disease, diagnosis, prognosis and treatment. And then he proceeds with his systematic and comprehensive discussion of diseases in a most logical order. Diseases of the nasopharynx and mouth, diseases of the larynx and bronchial system, and the lungs, the circulatory system, of the serous membranes, mediastinum and diaphragm. And next in order are the diseases of the hematopoietic system beginning with the bone marrow, the erythrocytes, leucocytes, etc.; then the gastro-intestinal tract, diseases of the liver, and bile passages are taken up in a most thorough manner. Nutrition and metabolism are discussed, with the comparatively new diseases of hyperinsulinism being given due consideration. The latest usable information on the ductless glands will be found most interesting and enlightening. Diseases of the nervous system are given liberal space. This chapter is written in an especial manner for the general practitioner. And in this logical order the entire field of medicine is covered. The wide-awake practitioner should feel very secure with this book on his desk. Many of our doctors will recall that Dr. Meakins was on the Mid-South Program last year at Memphis. This most valuable book is published by the C. V. Mosby Company of St. Louis and sells for $12.50.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

New and Standard Practices in the Management of Syphilis*

E. GURNEY CLARK, M.D., C.P.H.†
Nashville, Tenn.

New and standard practices in the management of syphilis demand: acurate diagnosis, adequate treatment, attention to the epidemiology of the disease and attempts at education.

Before beginning a discussion of these practices it seems advisable to review certain known facts in order to justify the amount of attention that is being given to this one disease. Surveys indicate that each year in the United States more than a million persons are infected with syphilis. It is well known that less than half of those infected go to a reputable physician for diagnosis and treatment. Bearing in mind the accumulative effect of such an incidence and realizing that less than half of these receive adequate treatment, it is easy to understand the estimate that one in ten adults is infected with the disease. Mississippi has the highest syphilis case rate of any state in the union and in this state it is the most common infectious disease. It has been estimated that there are 400,000 cases of syphilis in the colored and at least 40,000 cases of syphilis in the white population of this state. In the past ten years reported cases of syphilis are far in excess of reported cases of any infectious disease other than gonorrhea and influenza. There were in Mississippi in these 10 years 147,531 more cases of syphilis than of poliomyelitis; 147,547 more cases of syphilis than of smallpox; 140,470 more than of scarlet fever; 140,261 more than of typhoid; 137,843 more than of diphtheria; 130,414 more than of tuberculosis; 98,877 more than of mumps; 92,984 more than of chicken pox; and 23,419 more cases of syphilis than of measles.

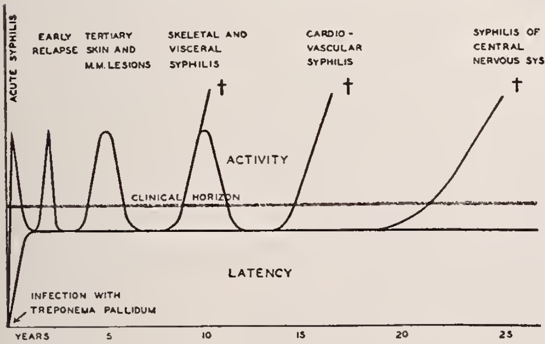

ACUTE SYPHILIS
EARLY RELAPSE
TERTIARY SKIN AND M.M. LESIONS
SKELETAL AND VISCERAL SYPHILIS
CARDIO-VASCULAR SYPHILIS
SYPHILIS OF CENTRAL NERVOUS SYSTEM
†
†
†
ACTIVITY
CLINICAL HORIZON
LATENCY
INFECTION WITH TREPONEMA PALLIDUM
YEARS
5
10
15
20
25

Fig. I

A diagram of the course of syphilis. The abscissas represent roughly the time factor, in years. The ordinates represent a combination of factors, as number, virulence, invasiveness of *Treponema pallidum*, and type and character of tissue response to infection.

The first requirement for the proper management of the syphilis patient is an **accurate diagnosis**. Syphilis is a disease, infectious and non-infectious, acute and chronic, capable of invading and affecting all parts of the body. Of prime importance then is the determination of the stage to which the disease has progressed. Modern management demands that the patient be placed in one of the following categories.

CLASSIFICATION

A. Early Syphilis (under 4 years duration)
  1. Primary—Sero negative—only when chancre is present.
  2. Primary—Sero positive—only when chancre is present.
  3. Secondary—only when lesions are present (rash, alopecia, mucous patches, condylomata, etc.)
  4. Secondary Recurrent—lesions return after no or after inadequate treatment.
  5. Latent (early). Infection of less than four year's duration. No lesion in heart or nervous system. Boold test only indication.
  6. Asymtomatic Neurosyphilis

B. Late Syphilis—(over 4 years duration)
  1. Latent (late)—duration 4 years or more. No sign of heart or CNS involvement.

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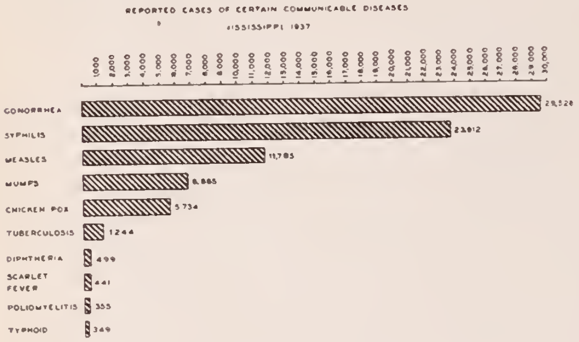
*Read before the Section on Hygiene and Public Health at the Seventy-first Annual Session of the Mississippi State Medical Association, Jackson, April 19, 1938.

†Instructor in Chemical Medicine Epidemiologist Syphilis Clinic, Vanderbilt University Medical School.

2. Teritary—cardiovascular, CNS, bone, gumma, ulcers, etc.
3. Asymtomatic Neurosyphilis.

This classification has for its basis the presence or absence of definite signs or symptoms and has discarded the older idea of definite time intervals of the various stages. The only time interval used is the four-year boundary between early and late syphilis. Latent syphilis may be early or late and is defined as that stage wherein the serological evidence is the only indication that syphilis is present. It presupposes a careful search for other manifestations. If the primary lesion is present, the stage is primary; if secondary lesions are present, it is secondary (and only when these lesions are present); and if central nervous system, cardiovascular, bone or other lesions are present, the stage is tertiary.

Dr. Hugh Morgan has best demonstrated the whole panorama, of syphilis infection by a diagram. The individual is represented by a single point at any place on the graph; one frame from the whole reel.



At any time a person may be above or below the clinical horizon. It demonstrates the first asymtomatic period before the appearance of the chancre, the possible infection without evidence of primary stage or even the secondary stage.

In the first few years infectious relapses may suddenly bring the infected person into the realm of clinical manifestation; or later, the development of bone, central nervous system or cardiovascular signs may project him above the clinical horizon. Or he may go on and live his life unmolested by the disease.

In order to classify properly the person seeking diagnosis and treatment we have at our disposal certain "instruments" none of which should be overlooked. First of these is the history that can be obtained from the patient of lesions, present or past, of previous treatment or of reactions, exposures, and the like. The knowledge of these factors is necessary in order to determine the duration of the infection.

Physical examination is next in importance not only from a diagnostic standpoint but also to prevent further damage to an already diseased heart, liver or eye, before the powerful arsphenamines are used. When indicated and when possible an x-ray of the heart can be used. Lumbar puncture is sometimes needed for diagnosis but in any event should be done before treatment is completed.

The next and most reliably positive, when positive, of our "instruments" is the darkfield examination of the presenting lesion to determine the presence or absence of the Treponema pallidum now thought to be the cause of the disease. This is a procedure for the expert, at least for one who has had considerable experience with examinations of this kind. It is a serious thing to condemn a person to one or more years of intensive treatment because a Treponema genitalis or Treponema calligyrum or some other type of spirochete similar to the pollidum is found in the preparation.

Too much cannot be said about the importance of serological tests as an aid in the diagnosis and treatment of syphilis. More essential, however, is the common sense interpretation of their use. The idea of treating a person on the evidence supplied by a single laboratory test without other evidence cannot be defended; nor can the procedure of waiting on a positive serological test to treat a person with positive darkfield lesions. To continue treatment over a period of years in attempting to reverse an irreducibly fixed positive test to negative without trying to ascertain the cause is unwise and often unnecessary. The many factors entering into the performance and recording of precipitation and complement fixation tests allow many possibilities for technical error. The significance of the report, then, depends on the sensitivity of test used, the reliability of the technician and his staff, and the age and state of preservation of the reagents used in the performance of the tests.

Before leaving the consideration of the various factors in diagnosis it will be well to call attention to the factor of symptomless infection. It has been demonstrated by the Clinical Co-operative Group that of persons

SCHEDULE OF TREATMENT FOR UNCOMPLICATED SYPHILIS

The Successful Treatment of Syphilis Depends on Constant Continuous Treatment by the Calendar

Week		*Treatment*	*Week*		*Treatment*	*Week*		*Treatment*	*Week*		*Treatment*
1	Neoars-	0.6 gram	19	Neoars-	0.6 gram	37	Neoars-	0.6 gram	55	Neoars-	0.6 gram
2.	phenamine	0.6. gram	20	phenamine	0.6 gram	38	phenamine	0.6 gram	56	phenamine	0.6 gram
3		0.6 gram	21		0.6 gram	39		0.6 gram	57		0.6 gram
4		0.6 gram	22		0.6 gram	40		0.6 gram	58		0.6 gram
5		0.6 gram	23		0.6 gram	41		0.6 gram	59		0.6 gram
6		0.6 gram	24		0.6 gram	42		0.6 gram	60		0.6 gram
7		0.6 gram	25		0.6 gram	43		0.6 gram	61	Bismuth	0.13 gram
8		0.6 gram	26		0.6 gram	44		0.6 gram	62		0.13 gram
9		0.6 gram	27	Bismuth	0.13 gram	45	Bismuth	0.13 gram	63		0.13 gram
10		0.6 gram	28		0.13 gram	46		0.13 gram	64		0.13 gram
11	Bismuth	0.13 gram	29		0.13 gram	47		0.13 gram	65		0.13 gram
12		0.13 gram	30		0.13 gram	48		0.13 gram	66		0.13 gram
13		0.13 gram	31		0.13 gram	49		0.13 gram	67		0.13 gram
14		0.13 gram	32		0.13 gram	50		0.13 gram	68		0.13 gram
15		0.13 gram	33		0.13 gram	51		0.13 gram	69		0.13 gram
16		0.13 gram	34		0.13 gram	52*		0.13 gram	70		0.13 gram
17	Neoars-	0.6 gram	35	Neoars-	0.6 gram	53		0.13 gram	71		0.13 gram
18	phenamine	0.6 gram	36	phenamine	0.6 gram	54		0.13 gram	72		0.13 gram

NOTE—(1) Dosage for first three injections on basis of 0.1 gram of Neoarsphenamine for each 25 pounds of body weight to maximum of 0.6 gram.

(2) If infection is of more than three years duration, give three weekly doses of Bismuth before proceeding with Neoarsphenamine.

(3) If lesions are present, give first three injections at five day intervals.

(4) 0.13 gram is the usual dosage of insoluble Bismuth advocated (2 grains) often referred to as 0.2 gram for convenience sake. Most preparations have 0.13 gram to each cc. Mercury may be substituted for Bismuth, preferably in the form of inunctions.

*At the end of the first year patients with seronegative primary may be placed on probation if blood has not been positive and if spinal fluid and physical examination are negative.

At the end of 72 weeks—probation if spinal fluid, physical examination and blood are negative. If blood is positive and other tests are negative, give three months rest followed by twelve weekly injections of Bismuth; rest three months and give another twelve weeks of Bismuth.

Prepared and distributed by the Tennessee Department of Public Health in co-operation with the Liaison Committee of the Tennessee State Medical Association. (November 1, 1937).

with early latent syphilis more than one-third can give no history whatsoever of their infection, and of those with late syphilis approximately two-thirds have no knowledge of the time that infection took place.

Some of these perhaps were unable to remember their lesions, in others the lesions were so evanescent as not to be noticed but in others no lesions appeared to warn them of their infection.

The aims in **treatment** of syphilis depend on the stage in which the disease is diagnosed. In early infection these are to prevent the transmission of the disease and to cure the patient. In latent syphilis treatment aims to decrease the probability of clinical progress or relapse; and in addition, in sexually active younger persons, to control potential infectiousness, and in the case of women, to protect the unborn child.

An evaluation of treatment methods by two independent agencies, the Clinical Co-operative Group in co-operation with the United States Public Health Service and the League of Nations health inquiry has definitely established the value of certain broad principles in **early** syphilis.

PRINCIPLES OF TREATMENT IN EARLY SYPHILIS

1. Continuous — no rest periods
2. Prolonged 15-18 months regardless of tests
3. At least 20 arsenicals and 20 heavy metal injections to control infectiousness
4. At least 30 arsenicals and 40 heavy metals for cure
5. Life-long observation.

Treatment of late syphilis cannot be standardized for obvious reasons. If latency has been proven, that is, freedom from signs and symptoms of any late manifestation of the disease four years after infection, continuous treatment for one year followed in the second year by two courses of a heavy metal is sufficient regardless of the outcome of the blood serological reaction.

An outline treatment which fulfills these requirements for uncomplicated syphilis has recently been prepared by the Tennessee State Medical Association in co-operation with the Tennessee Department of Public Health and has been distributed to the entire profession in that state.

This chart shows a plan of continuous treatment for a period of 18 months, alternating an arsenical and a heavy metal, with early short courses of heavy metal to prevent infectious relapse. Variations in the scheme are noted below. In cases of more than three years standing three introductory doses of a heavy metal are advised. In infectious cases best results are obtained by giving the first three arsenicals at four-day intervals.

In those persons with early syphilis receiving less than four injections of an arsenical forty-five per cent have mucocutaneous relapses that are as dangerous as the original secondary stage. A few more injections will reduce the recurrence of this infectious period to 9% of those receiving from 5 to 9 injections of an arsenical, regardless of the amount of heavy metal received. By giving as many as 20 arsenical injections infectious relapse is reduced to less than 2% of the early cases treated. Of all persons with early syphilis who receive less than 20 injections 15% again become infectious and are able to spread the disease again.

That these recurring lesions are more apt to be extra genital than genital has been proven by studies of the Clinical Co-operative Group. Sixty-nine per cent are extra genital and 31 per cent are genital. Those in the inadequately treated group, wherein so many of the cases fall, are potentially dangerous from an extragenital point of view for several years after their last treatment. Eighty-five per cent of the recurrences have taken place by the end of the second year.

Continuous treatment is of more value in reversing the serological test to negative in a year's time. With continuous treatment 82% with intermittent 37% and with irregular treatment only 5% are reversed by the end of the first year.

A certain number of individuals will have a persistently positive Wassermann regardless of the amount of treatment given. In early syphilis, after continuous treatment for six months, a persistently positive Wassermann is strongly indicative of central nervous system involvement. However, after the spinal fluid is found to be negative, and examination of the cardiovascular system is negative, the individual who has had the maximum advised treatment and continues with a positive Wassermann is in no more danger of clinical relapse than is the person with a negative reaction.

Each person with tertiary syphilis is a law unto himself. No definite procedures can be laid down. The use of fever therapy, malaria.

tryparsamide, subdural treatment should be in the hands of specialists or under the direct consultation of those who have had experience with these forms of therapy.

The standardization of treatment in the prevention of the prenatal syphilis depends entirely upon time the diagnosis is made and treatment instituted. Four times out of five will the untreated pregnant syphilitic give birth to diseased children. With a minimum of 20 weeks treatment with an arsphenamine and a heavy metal given concurrently or in courses, this figure is entirely reversed.

Should we look beyond the patient who presents himself for treatment? If he has tuberculosis or smallpox or diphtheria do we fulfill the obligation of our profession when we treat him and do nothing more? Syphilis seems to be spread chiefly through a series of localized outbreaks which can be traced to relatively fewer sources than tuberculosis, smallpox or diphtheria. In principle the **epidemiology** of syphilis is the same as that of any other communicable disease. It seeks to answer two questions: (1) From whom did the patient get the infection, and (2) To whom has he given the disease.

Several illustrations will prove the practicability of such metnods in the management of syphilis.

"A Sunday school teacher complained that the wife of a certain official was "dosing boys with a disease." Wassermann tests for the community were checked and 17 positives were found. These for the most part were under fictitious names but came from one doctor. The doctor was called on and the situation explained and he gave a great deal of help.

"A station agent was infected with syphilis by the wife of an official. A school teacher was infected by this agent and married another man with whom she was keeping company. She infected her husband who had no idea he had syphilis although he had mucous patches at the time of examination. The teacher miscarried a syphilitic foetus. Her secondary lesions were diagnosed as German measles by a physician. The source was traced to the official's wife who was as promiscuous as was humanly possible, probably a nymphomaniac. She took her 15-year-old daughter with her on her escapades. Her husband had necrosis of nasal bones." (Munson, 1932).

"Two young girls in vacation area consulted a physician about "cold sores" that were hard to cure. Both virgins had kissed the chauffeur of some family vacationing in the area. Investigations showed him to have mucous patches. Finally the source was found to be a woman to whom two other cases were traced." (Munson, 1933).

A young married woman with an eruption on her body was found by a clinic physician to have secondary syphilis. She claimed to have been infected by a girl friend living with her who had used the family douche bag. As the patient's sister also used this douche bag, she was examined and found to have secondary syphilis. The girl friend who was thought to be the source of infection did not have the disease. (Nelson, 1933).

A nurse in a large hospital burned her thumb on an alcohol lamp while preparing medication for a baby. The burn failed to heal, and five weeks later, when a rash came out on her body, it was discovered that she had syphilis and that the primary sore was in the burn of the thumb. It was then found that the baby had "snuffles," the running nose of congenital syphilis in a highly communicable stage. The baby's mother was examined and, of course found to have syphilis. The husband also had syphilis which he had acquired before marriage. (Nelson, 1933).

Gray and Cleveland in Mississippi report two interesting outbreaks of syphilis. (1935).

The lead to the first one was a school boy who was found to have rash during routine school inspection. The family was studied and it was revealed that 6 of the 10 members of the family had syphilis. Before the mode of admission to the family was determined each of the parents accused the other of marital infidelity, however, finally it was found that the 17-year-old daughter had had intercourse with a neighbor's boy who had history of previous penile lesion. She gave no other sexual history but while she had the rash she had masticated food for her brother, age 2; also had given second-hand gum to her brother, age 8 (original school child) and to sister, age 4; all of these developed secondary syphilis. The child age 2 nursed the mother who had a chancre of the breast and later secondaries of vagina and skin. She infected her husband who had a penile lesion. Four other children, ages 6, 10, 15 and 19 years of age were not infected.

The second outbreak concerned a man and two neighbor boys who went to Arkansas to pick cotton and during their stay used the same razors. The man cut himself and a chronic sore developed, then a rash. His wife had secondaries soon after and while she had lesions in her mouth she masticated food for her three-year-old child who developed a chancre of the lip. One of the boys had had a primary lesion shortly before the trip and had a sore throat when they started out.

In Monroe County, Tennessee, a health officer and an interested physician disclosed a very interesting outbreak affecting 30 odd people traceable to one individual, a CCC boy who was discharged from his camp after receiving five injections of an arsenical following a syphilis infection. (1936).

He received no more treatment until three months later when he came to his physician during an infectious muco-cutaneous relapse. He gave as contacts three women who subsequently developed primary and secondary syphilis. One of these women was given as a contact to two men who were seen with secondary syphilis. To another of these was traced the infection of four men, one of which had infected his wife and child. The third was responsible for the infection of eight others directly who infected eight more. The sequence of events indicates that all of these came directly from the one source. It is interesting that of the above who had secondaries all showed very severe general reactions. This particular outbreak has many very interesting ramifications that are now in the process of being worked out.

One exceedingly interesting family outbreak resulted from the investigation of a young woman who was seen with a darkfield positive primary lesion of her breast. (Vanderbilt, 1935).

It was found that the patient's mother had had a sore mouth and a rash on one occasion when she had nursed the patient's child. This child, age 2 months, and the patient's brother, age 18 months, both had been infected by the patient's mother. Another child had been infected, through passing candy or gum from one to the other. Two other children and the patient's husband had not become infected. The patient's father was found to be the source of the infection, having been infected during a drunken spree some months before.

Another interesting series of infections, apparently related to one source was brought to light following an investigation of the contacts of a woman who came to Vanderbilt Hospital with a tularemic ulcer which had failed to heal after a long period of time. (1935).

In this ulcer were found unmistakable Treponema pallida. It turned out that she had washed the clothes of her married son while he had a generalized rash at the same time that she had an ulcer of her finger. The son apparently was infected by his wife who also infected her sister. The sister's husband was also infected, as was their child. The source of the original case was not determined.

One outstanding group of cases was investigated by Drs. Smith and Brumfield in Charlottesville, Virginia. In this group centering about an industrial plant 30 miles from the city 57 names of exposed persons were obtained of whom 24 were examined, 15 had acquired syphilis. (1933).

There are many more instances which prove the practicability of such methods. How they may best be carried out will depend on the community in which attempts are made.

Preventive medicine no longer has to vie for a place in the field of practical medicine. It is an established part of the practice of medicine, and includes more than the administration of vaccines, serums and the like. For syphilis we have no vaccines, no antitoxin, no serums for prevention. We cannot prevent the contact that causes it, nor immunize against it. As a weapon for prevention we have left public enlightenment as to syphilis as a disease.

Because of differences in individual interpretation there may be some question as to the extent to which the general public should be informed about disease. There is, however, no doubt as to the source from which this information should be dispensed. However, we as a profession should educate ourselves before we present to the public the salient facts regarding syphilis.

Is our attitude toward infected individuals more tolerant than that of the public we would educate? Have we learned as much about syphilis in proportion to the information available as we have about other diseases? Do we think of syphilis as a venereal disease entirely? If we do, how do we propose to convince the public to whom venery is synonymous with sin that syphilis is so often not a venereal disease.

What should the public be told about syphilis?

Should the argument against syphilis always being a venereal disease be presented in order that cases hiding behind the century old taboo would come out and seek treatment?

Should the public be told that 10% of them are infected so that the unfortunate patient will feel that he is not alone in his misfortune?

Should the word be spread that syphilis is a disease more prevalent than any of the other diseases, by thousands of cases, so that everyone will be aware of its presence in every community?

Should they be told that untreated syphilis is a shortener of life so that those who need to be treated will continue their treatment to prevent heart disease, paresis and tabes, to prevent loss of life years?

Should they be told that cure is possible so that the infected ones will be given a ray of hope?

Should they be warned of symptomless infection, be told something of the cause of the disease in order that they will understand when the doctor wants to take a blood test?

Should the public know that congenital syphilis can be prevented, that syphilis is no respector of social standing or shall numerous children be born each year with syphilis?

Should everyone know that treatment takes more than a year, that disappearance of the sores does not mean cure in order that quacks who indicate otherwise cannot thrive?

Shall we tell them or shall their information come from unreliable sources?

Summary—

Proof that syphilis is a problem in Mississippi is not lacking. Factors in the management of syphilis are presented. Accurate diagnosis requires a history, physical examination, darkfield examination and laboratory procedure. Adequate treatment is defined but no standard treatment for all cases can be given. Epidemiological measures are practical and education is necessary.

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Some Thoughts On A Gonorrhea Control Program

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In the year 1875, we find a statement attributed to Dr. P. H. Bailhache of the U. S. Marine Hospital Service, which reads as follows: "That a city or state has the same right to limit the personal liberty of anyone who endangers the public health by propagating one disease as it has to isolate him from spreading another is too self-evident to require demonstration; yet we present the anomaly of guarding against the lesser evil while we ignore, or actually encourage the propagation of the most dangerous and implacable enemy to the human race." From this statement it is evident that some men for many years have recognized gonorrhea as an acute communicable disease that was most dangerous in its sequelae or results. They recognized that it was a reportable disease, that in the sight of law and justice should be controlled as any other acute communicable disease, but for some reasons the ordinary routine for handling other communicable diseases has never worked successfully and satisfactorily in the control of venereal diseases. You will note we have used the term "venereal diseases" in presenting a paper that is primarily intended to discuss the program of gonorrhea control. In explanation, we will state that venereal diseases are so closely related epidemiologically, and occupy so nearly the same moral condemnatory status in the public mind, and are productive of practically the same reactions or psychology in the individual victim's mind that a program for the control of one will of necessity be practically in many phases an acceptable program for the control of the others. Only recently has the challenge of Ludwig Weiss as printed in the *Journal of the American Medical Association* of May 9, 1903, seemed to have registered or engendered sufficient interest to obtain action. He forcefully stated that "the danger of venereal diseases to the people, their socio-economic importance, their causing premature invalidism, are of sufficient moment for all governments to exert their utmost to cope with them." Despite this inclusive condemnation and warning of the direful effects of all venereal diseases, it seems apparent that the program now being formulated and placed into effect is hinging largely about the control of syphilis *only.*

When we consider the **fact** that authentic reporting and surveys of the diseases show the incidence of gonorrhea twice, and oftentimes three and four times more prevalent than syphilis, when we consider the fact that it may repeatedly be contracted by the same individual; although no venereal disease is wholly a moral question, yet when we consider the incidence of gonorrhea innocently acquired is by far greater than syphilis likewise acquired, we are moved to deplore any venereal disease program that gives to gonorrhea a low minor setting or a negative consideration. Furthermore when we consider the possible end results of gonorrhea ophthalmia, gonorrhea in virtuous married women, gonorrhea in young girls before adolescence, when we consider the possibilities of a lifetime blindness, sterility and invalidism, then we are further compelled to insist for a definite and non-evasive place for gonorrhea in our venereal disease control program. Per se its mortality rate may be low but its morbidity rate is high and its complications bring to its victims horrid and tragic results.

In 1937, a committee from the *American Neisserian Medical Society* was appointed in compliance with an invitation from the United States Public Health Service to make recommendations for a "gonorrhea control program" for state and local health departments to inaugurate. On this committee were such men as Dr. C. M. Carpenter of Rochester, Dr. E. D. Barringer of New York, Oscar Cox of Boston, Dr. W. M. Burnet of Chicago, Dr. Walter Clark of New York, Dr. Adolph Jacoby of New York, Dr. Laurie of Syracuse, Dr. Muchenfuss of New York, and many others. In their report they recommended (we quote in part):

"(1) The public should be taught the cause and nature of gonorrhea, its presence, epidemiology, how to prevent, reasons for treatment, and what is accomplished or avoided by cure.

"(2) That the patient be informed of the nature of gonorrhea in detail, of the extent of his infection and its possible extension, of the general nature of treatment and its non-specificity, what treatment must accomplish in terms of clinical and laboratory results before cure can be considered.

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*Read before the Issaquena-Sharkey-Warren Counties Medical Society, Vicksburg, August 9, 1938.

"(3) That immediate evaluation be made of the gram stain, culture procedures and serodiagnostic methods since they promise far more usefulness if they be made more reliable by proper standardization. (They recommend standardization of laboratory procedures).

"(4) That a manual of standard procedures be prepared and distributed to the medical profession which deals with the manner of collecting specimens for the laboratory and a *correlating* of laboratory and clinical findings.

"(5) That exploitation of any therapeutic agent be prohibited without authentic and adequate investigation, and that the American Medical Association be memorialized not to publish any allegedly favorable reports on preparations for treatment, which have not had the approval of the council of pharmacy and chemistry.

"(6) That a co-operative clinical group, similar to the 'set up' for syphilis, be formed, that health departments provide drugs and equipment found valuable to these groups, and that the groups study and evaluate their diagnoses, treatments, and standards of cure of gonorrhea and evaluate the different treatments or procedures in the control of communicability.

"(7) That a personnel be trained, especially a follow-up personnel, and that choice of personnel be based on demonstrated aptitude and suitable personality, rather than routine service classification or assignment.

"(8) That hospitalization be obtained in all cases of acute gonorrheal pelvic involvement in females, in acute complications in males, and in children, especially females when special isolation precautions must be observed.

"(9) That physicians in clinics and private practice be encouraged to promote the use of local chemical, or mechanical prophylaxis, and that the United States Public Health Service determine what constitutes a reliable prophylactic and that they support national legislation that will prohibit other than approved material to be sold or offered for sale."

We have touched only in part the many valuable recommendations made by the committee from the *American Neisserian Medical Society* made to the U. S. Public Health Service, but these are thought-provoking and should challenge and hold the attention of all medical men and especially those who are treating cases whether in private office, clinic or hospital annex.

We think it opportune to state that this committee also placed itself on record, by setting down what they agreed were the most important factors that prohibited the gonorrhea patient from cure, namely:

"(a) Lack of **understanding** of the importance of immediate and competent medical care.

"(b) Willingness of the druggist to prescribe and treat.

"(c) Failure of the patient to co-operate with the physician."

We might discuss at length and with profit every recommendation this committee made that we have presented in this paper, but the time assigned will not permit. Taken as a whole, we, personally, can approve each one quoted.

The Education of the Public. Although we have quite recently gone a long way in breaking down "age old" and hitherto permanently resisting barriers, although we speak more freely and are heard more thoughtfully, nevertheless there is a dignity of manner and approach that is imperative, a dignity and manner that scientists bear in approaching any subject in public discussion. The fastidiousness of the public mind, the linking of the entire problem with a **moral** cause and effect has not yet been entirely eradicated. Therefore, it is suggested that in our public education program, other than stressing the **high** incidence of gonorrhea, its communicability, its maiming and crippling results, we stress the fact, whether contracted in or out of wedlock, in the haunts of degradation or palaces of refinement, that it always **attacks human beings,** the innocent and the guilty, and that it is a public duty and obligation of the state or society, through the services of health workers, private physicians and clinics, to suppress and control gonorrhea just as they do typhoid, diphtheria, etc., that it is a public duty to one and all, each and every citizen, and that **morals** do not enter into the cure or the control. And further may we stress the fact that if by continuity, or reproduction, we build this present civilization into a stronger, more virulent and potent civilization physically, intellectually and morally, we must eradicate from all active and potential progenitors those diseases and factors that emasculate and that physically and intellectually degenerate. We would recommend to the state department of education, the county and city superintendents of schools, the desirability of instituting a course of lectures for the members of the high school senior class, delivered by the county health officer or a specially qualified physician approved by the medical society, dealing with the physiology and care of the human body and how to safeguard same against communicable diseases; that such a course, through scientific discussion, lift these social diseases from the gutter of obscenity and present them as maladies that disable, disfigure, deform and disqualify their victims for the higher responsibilities and achievements of life. Such teaching, such information, imparted and received in the early adolescent years, to our mind, would be an incomparable asset to one's knowledge and defenses in life. We would not advocate an educational program creating morbid fear and appaling horror in the public mind, but would rather instill the fundamental truths with a message of cheer to those who would be cured, and one of hope to those who look for final control.

The recommendation for a trained personnel applies equally to those who would treat and those who would do follow-up work, case and contact work. The doctor has been handicapped from the beginning. It is said that in ancient Rome the physician of **standing** refused to treat the "morbus indecens" or indecent disease, and through all these intervening years the curriculum for practically all medical schools assigned little time to so despised or contemptible a subject. The general practitioner has hardly had time to ascertain, much less master well, the elementary facts. The successful surgeon has not seen fit to welcome the "social outcasts" from this malady into his frequented waiting rooms. Those who would specialize, **with few** exceptions, have sought more revered and more highly esteemed specialties, and so this field has too often been left to the charlatans, the quacks, the never-do-wells in the practice of medicine. Hence, the "years of neglect and inattention have contrived to produce a state of affairs which is a menace to the safety of the community and a reproach to our profession."

The Co-operative Clinical Group, recommended by the committee, by some has been resolved into treatment centers, embracing the private physician, his office, the hospitals with specially assigned and equipped V. D. rooms wherein highly trained doctors and attendants are in charge, and the **free orpart-pay clinics.** Emphasis is placed on a properly trained personnel in all of these. We find one criticism made, especially of the free or part pay clinics, even though training and equipment are evident, is the dangerous tendency of evaluating achievements by the number in attendance. Efficiency cannot be measured by numbers, nor should grants or finincial support be allocated alone on attendance at a clinic. Neglect of history-taking, failing to study each individual case, correlating physical and laboratory findings, determining in as far as possible, sensitivity to medicinals that may be used, failing to institute treatment guardedly, failing to watch and note untoward reactions, may brings much grief and unfavorable public opinion.

In concluding this sketchy paper we are impressed that we could not write a more fitting summation than we find in the concluding remarks of Dr. Ambrose J. King of London, England, in an address delivered April 6, 1937, at Washington, D. C., before the conference of State and Provincial Health Authorities of North America, when he said, "I believe the control of gonorrhea remains a *problem* because our knowledge of the elementary pathology of gonococcal infection is defective and in consequence our methods of treatment are inadequate. The future solution is dependent upon improved facilities for research work and for treatment, and upon the attraction of a different type of worker in this field. The interest and co-operation of the whole medical profession and the lay public must be sought. In short, the status of our subject must be raised and gonorrhea must take its place with cancer, tuberculosis, and acute rheumatism, among the major medical problems of this or any age."

The Treatment of Gonococcic Infections In the Male With Sulfanilamide*

TEMPLE AINSWORTH, M.D., B.S.
JACKSON, MISS.

Since the introduction of sulfanilamide in America about two years ago, it has been used in the treatment of almost every type of infection with which mankind is afflicted. Its use has become so universal that many physicians prescribe the drug to almost every patient they see regardless of the condition or diagnosis. This indiscriminate use of the drug is certainly to be condemned.

The use of the drug in gonococcic infections was first reported by Dees and Colson in May, 1937. Since that time numerous reports have appeared in the medical literature regarding the use of the drug. The results obtained in gonococcic infections have been varied, some observers reporting as high as 90 per cent cured, others as low as 33 per cent.

In December, 1937, I reported before the Section of Urology of the Southern Medical Association my results in the treatment of 147 patients with gonococcic infections, and I have since that time treated over 80 patients. I do not have anything new to tell you about the use of the drug; however, I am glad to report to you my observations in the treatment of these 230 male patients with gonococcic infection. I do not see as large a number of cases of gonorrhea now as I did before the introduction of sulfanilamide; however, I do not feel that this is due to any decrease in the number of cases but rather may be explained by the general use of the drug and the fact that not so many of the patients develop complications.

The mode of action is not well understood. However, Long has shown that there is a marked increase in phagocytosis in the peritoneal exudate of mice infected with gonococci. He has also shown that mice rendered granulocytopenic by treatment with benzene do not react favorably under sulfanilamide therapy. Hence his conclusion is that leukocytes are necessary for the beneficial effect of sulfanilamide. Most probably it works by rendering the bacteria more easily ingested or by increasing the phagocytic power of the white cells.

As to the dosage, I do not believe there can be any definite set rule. I believe it is important that the patient receive relatively large doses at the beginning of treatment. Many of the failures, in my opinion, are due to the fact that the patient did not receive a sufficiently large dosage at the beginning of treatment. A majority of the patients treated with small doses either by a physician or self-medication do not show favorable response to the drug even if given large doses later. The practice of the patient going to the drug store and buying the drug without a doctor's prescription is apt to cause him to be less likely to respond to the drug.

As to the contra-indications, since 95 per cent of the drug is excreted through the kidneys, patients with impaired renal function should be given the drug cautiously, if at all. Older people do not tolerate the drug well. It should not be given in severe anemia or to any patient who has a granulocytopenic tendency.

The patients in this series have usually received 80 grains daily in four divided doses for the first two days, 60 grains daily in four divided doses for the next ten days. They have all been advised to take 20 grains of bicarbonate of soda daily and to avoid the use of any laxative which is apt to produce liquid stools, especially magnesium sulphate. Since there is such a marked variation in tolerance to the drug, the dosage scheme must be varied according to the reaction of the individual. The dosage is decreased on the appearance of severe headache, marked dizziness, anorexia or extreme cyanosis. The drug is discontinued at the first sign of fever, generalized dermatitis, complete loss of appetite, or evidence of anemia. The concentration of free sulfanilamide in the blood may be determined fairly easily; however, I do not think this is, as a rule, necessary.

In this series of cases, there have been numerous reactions, none serious, and all have cleared up on discontinuation of the drug and ingestion of large quantities of water.

I have given numerous patients 10 c.c. of prontosil, intramuscularly, daily or on alternate days in addition to sulfanilamide. As you know, prontosil is broken up in the body and the active principal liberated is sulfanilamide. It is, therefore, useless to give prontosil to those patients who tolerate sulfanilamide well. Prontosil satisfies the type of patient who wants 'shots.' The red color imparted to the urine produces a good psychological effect, and many patients return with more regularity for the 'shots' than for observation alone.

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*Read before the Issaquena-Sharkey-Warren Counties Medical Society, Vicksburg, August 9, 1938.

In this series of 230 patients, all the common types of gonococcic infections in the male have been encountered. Since I treat only an occasional female patient with gonococcic infection, they are not included. There has been little difference in response to the drug as to whether the infection was acute or chronic. If anything, those with chronic infections responded more rapidly. I have found that if the patient does not show marked improvement after the first four days, he is apt to be one who will not respond favorably to the drug. Frequently the response is dramatic, urethral discharge stopping in 12 to 24 hours, and usually those patients with posterior urethritis, tenesmus and frequent and painful urination, are relieved after one or two doses. In this series, 41½ per cent of the patients responded fairly rapidly and it was not necessary to use any other treatment in order to clear up the infection. The discharge stopped on an average of four days; smear was negative on an average of 9 days, and they were considered cured on an average of 20 days. It is, of course, important to explain just what is meant by a cure. My criteria are that the patient have no urethral discharge, no symptoms, clear urine in the three glass test, and no white blood cells or gonococci microscopically in centrifugated urine specimen.

In the second group, or 35.8 per cent of the cases, the infection showed some response to the drug but it was necessary to use some adjuvant treatment. It is probable that many of the patients in this group would have responded better had they been able to take the drug in sufficient dosage. In these patients, the discharge stopped on an average of 10 days; the smear was negative on an average of 22 days, and they were considered cured on an average of 34 days. This makes a total of 77.4 per cent of the patients who were either entirely cured or definitely benefited by the use of the drug. The remaining, or 22.6 per cent, were unable to take the drug even in small doses, or their infection showed little or no improvement. In this group, the discharge stopped on an average of 29 days; smear was negative on an average of 50 days, and they were not considered cured until an average of 70 days.

In closing, I wish to advocate that although you give large doses of the drug, at the same time have respect for it, watch your patients carefully, and individualize each patient's dose as to the reaction to the drug. Do not expect it to cure every case and do not attempt to give the drug, especially in large doses, unless you can see the patient fairly frequently.

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Mississippi State Medical Association

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Papers and news material for publication should be received not later than the fifth of the month preceding publication.

The editors are not responsible for statements made by any contributor.

Manuscripts and all material for publication should be addressed to the editor, P. O. Drawer 231, Vicksburg, Mississippi.

EDITORIALS

THANKSGIVING DAY

Ah! on Thanksgiving day, when from East and from West,
From North and South, come the pilgrim and guest,
When the gray-haired New Englander sees round his board
The old broken links of affection restored,
When the care-wearied man seeks his mother once more,
And the worn matron smiles where the girl smiled before.
What moistens the lips and what brightens the eye?
What calls back the past, like the rich pumpkin pie?

—From The Pumpkin, by Whittier.

MEDICAL SERVICE ON AN INSURANCE BASIS TO HOSPITAL PATIENTS OF LIMITED MEANS

At the recent meeting of the American Hospital Association in Dallas the following statement of principles concerning possible periodic payment plans for hospital care and medical service in hospitals was approved by the House of Delegates:

Concerning the Principles of Relationship Between Approved Hospital Service Associations and the Medical Profession in Proposals to Provide Medical Service on an Insurance Basis to Hospital Patients of Limited Income.

With more than 2,000,000 subscribers enrolled, and with membership increasing at the rate of more than one million per year, hospital service plans approved by the American Hospital Association are not only helping patients to pay their hospital bills, but are also contributing indirectly to the preservation of private medical practice in hospitals.

The prevalent restriction of these plans to semiprivate hospital service, and the omission of any provision for physicians' fees in hospital cases, have placed non-profit hospital care insurance beyond the reach of many employed workers of limited income.

There is a strong demand on the part of these low income groups for creation of hospital service plans adapted to their means. Medical societies are now studying, and in some cases are preparing to sponsor, group payment plans to cover medical fees of patients of limited means. If these efforts are successful, they will reclaim for private medical practice a segment of medical service in hospitals even larger than that which is protected by existing hospital care insurance plans.

The American Hospital Association believes that efforts by the local medical profession to extend the voluntary insurance principles to medical fees in hospital practice can be assisted by co-operation with approved hospital care insurance plans. Approved plans are urged to offer their co-operation and assistance to this end. Joint efforts will make hospital care available to millions of persons of limited means, who in this manner would pay for both hospital care and medical treatment in hospitals.

The American Hospital Association is prepared to approve periodic payment plans for hospital care and medical service in hospitals which are also approved by the local medical profession and which conform to the following principles:

1. Sponsorship and control by non-profit organizations, representatives of hospitals, the medical profession, and the public.
2. Free choice of physician and free choice of hospital consistent with existing relations between approved hospitals and their physicians.
3. Financial soundness and adequate accounting.
4. Equitable payments to physicians and to hospitals.
5. Separate finances and reserves for hospital care and medical services of attending physicians.
6. Hospital and medical service benefits determined by hospitals and the local profession.
7. Dignified promotion and administration.

The American Medical Association is invited to confer with the American Hospital Association regarding these and related problems with a view to harmonious joint action in the public interest.

* * * *

An editorial in the Journal of the American Medical Association of October 15, 1938, comments:

"Thus the American Hospital Association indicates a willingness to co-operate with the

American Medical Association with a view to harmonious joint action in the public interest. It recognizes the right of the physician to control the terms of his service. It recognizes the free choice of physician and free choice of hospital as fundamental to good medical care. It supports the established action of the House of Delegates of the American Medical Association in maintaining separate finances and reserves for hospital care and for the service of the physician.

"It is encouraging to have such a statement from the leaders in the field of the hospital, since the hospital is today a center of medical service. The action taken by both the American Medical Association and the American Hospital Association now permits the establishment of co-operative plans for group payment for medical service without invalidating any of those ideals and principles associated with medical care which are vital to the provision of good medical service."

* * * *

Already plans are being considered for a group insurance service to provide both hospital and medical care in New Orleans, in response to a demand from industrial leaders and physicians. The successful Hospital Service Association of New Orleans is offering its co-operation to the Orleans Parish Medical Society. Such plans are sure to be put into operation throughout the country. It is merely a question of supplying a demand that will not be denied. It is to be hoped that Mississippi will again show leadership.

MEDICAL TALK

The following radio talk by Irvin Abell, president of the American Medical Association, states the principles and present stand of the National Association at this time when medicine seems to be under fire. It probably represents the opinion of a majority of the profession and deserves thoughtful consideration.

Article 2 of the Constitution of the American Medical Association reads as follows:

> "The objects of the association are to promote the science and art of medicine and the betterment of the public health."

Section 1 of the Principles of Medical Ethics reads as follows:

> "A profession has for its prime object the service it can render humanity; reward or financial gain should be a subordinate consideration. The practice of medicine is a profession. In choosing this profession, an individual assumes an obligation to conduct himself in accord with its ideals."

At the time of the adoption of these principles, the form of society as a whole was comparatively a simple one: its evolution through the years has developed it into an exceedingly complex organization, involving changes in character of practice and distribution of service. During these years the medical profession has sought constantly to advance its standards in every direction that promotes efficiency and operates for the increased welfare of the people we serve. Drastic changes have been made in medical education, affording assurance that the graduate of today is competent and efficient; hospitals have been improved, insuring dispensation of service compatible with modern medical knowledge; the fields of specialization have been clarified and special training delineated for those desiring to register therein.

The Principles of Ethics by which we have been governed since the organization of the American Medical Association has been criticized as being obsolescent and antiquated. It is readily admitted that its underlying principles are ancient, but it is submitted that they are the only ones, whether in the ethics and economics of medicine or industry, that have stood the test of time. The medical profession by principle and tradition is committed to the idea that the prime object, the standard of value and the social reason for its existence are all one thing—the service it can render humanity. That service is further interpreted as the maintenance of health and the postponement of death. Whatever plan is proposed in regard to medical care is automatically tested and accepted or rejected by the profession in relation to its influence on the morbidity and mortality of the community or communities affected.

Forces or propaganda have apparently made a studied effort to indicate that the American Medical Association opposes all change and that it is essentially a stand-pat dissemination of the truth as to what has been accomplished by the American Medical Association for the people of this country and as to its true attitude toward the changes that are occurring in and that are being proposed for the medical care of our people.

The American Medical Association has constantly recognized the need for continued expansion of preventive medicine and a wider use of medical care. It has, however, at the same time been greatly concerned with the method of administering both preventive medicine and medical care and with the ultimate effect of various changes on the morale as well as on the health of our people. The charge that is sometimes made, that physicians oppose changes because of a desire for more and more money, is a misstatement of our attitude. It is a fundamental tenet of the American Medical Association that the poverty of a patient should demand the gratuitous services of a physician; but endowed institutions and organizations for mutual benefit or for accident, sickness and life insurance or for analogous purposes have no claim upon physicians for unremunerated services. As a professional man the individual physician has a right to determine the conditions of his service.

It is a fundamental tenet of the American Medical Association that it is unprofessional for a physician to dispose of his services under conditions that make it impossible to render adequate service to his patient because, to do this, is detrimental to the public. It is established as a principle of our organization that it is unprofessional for a physician to dispose of his professional attainments or service to any lay body, organization or group or individual which permit a direct profit from the fees, salary, or compensation received to accrue to the lay body, or individual employing him. Such a procedure has been established as beneath the dignity of professional practice, as unfair competition with the profession at large, as harmful alike to the profession and the welfare of the public, and as against sound public policy.

Within these fundamental tenets experimentation in new forms of medical practice has not been inhibited. Hundreds of experiments have been carried on in the past and are now being carried on under the auspices of medical societies which are component parts of this organization, planned distinctly with a view to securing a wider distribution of medical service and to making more and more medical care available to a greater number of people. Thus the American Medical Association has never opposed the principle of group hospital insurance, notwithstanding repeated attempts by those who would place the Association at a disadvantage, in asserting that the House of Delegates has opposed this principle. The American Medical Association through its component societies has frequently given aid to the development of group hospital insurance, asking only proper safeguards for the patient and for his physician in the development of such plans.

The Association has never opposed suitable care by municipal, county, state or other governmental agencies for the indigent or for those on the borderline of indigency. It has urged state, county and other medical societies to develop "the most accurate and complete information that will enable them to maintain continuous medical care that is sufficient in amount and satisfactory in quality."

The Association has constantly opposed the adoption of any form of state medicine by any definition of that term; and it has refused to endorse vague plans that would make the care of the indigent and of those on the borderline of indigency, or those well able to pay, a burden on the workers of this country. The American Medical Association has never opposed suitable participation by the government through any of its agencies in preventive medicine or in any legitimate function of government in relationship to the care of the sick. By and with the aid of local, county, state and national medical organizations, the United States Public Health Service has been enabled to carry out far-reaching plans for the control of venereal disease, for pneumonia, for cancer, for the expansion of personal and public hygiene and for the prevention of infections. Without such participation these accomplishments would never have been attained.

The American Medical Association and its constituent bodies have constantly opposed any attempts on the part of local, county, state or federal governments to make medical care a political issue. American medicine fears political bureaucracies. The medical profession of this country wishes to keep the practice of medicine within the medical profession. It does not conceive that any political agency can do the job with one-tenth the efficiency at ten times the cost.

The American Medical Association has never opposed the principle of insurance. An organization such as ours is in itself of the nature of a co-operative group. It is not the principle of insurance that is opposed by American medicine. The principle which we do oppose is political administration and manipulation of the insurance organization, devotion of a considerable portion of the funds thus derived to the payment of great numbers of employees not directly concerned with the service, but intimately concerned with the maintenance of a political organization, and expansion of such organizations to wield greater and greater power in the nation's affairs.

The American Medical Association has not opposed insurance against the costs of sickness, of disability, of unemployment, of old age, or of death. It does oppose any interference by any outside agency—commercial, governmental, or otherwise—into the relationship between doctor and patient which is fundamental in good medical care.

We have recently heard the statement that the worth of this relationship is a fancied one, yet it possesses reciprocal qualities that inure its value both to the physician and to the patient. With the realization by the physician that the patient is selecting him for personal service has demonstrated a confidence in his ability and integrity comes a determination to justify such trust by giving service to the best of his ability. The family physician knows the ancestry and heredity of the patient, is familiar with his temperament, the conditions under which he lives, his financial and emotional worries and has a sympathetic attitude toward his problems—collective knowledge that has a definite value in carrying on through the crises of illness and in thwarting or minimizing the encroachment of disease.

There is need for far more factual knowledge than is thus far available. An attempt to secure such factual knowledge is being undertaken by the American Medical Association as a part of its nation-wide survey of medical care. The reports of some of the counties already published indicate that it is possible to make this survey an accurate picture of the status of medicine in every portion of the country. Without such a picture it is impossible for any agency to develop suitable scientific legislation to meet the actual needs that exist.

Only the House of Delegates speaks for the American medical profession as a whole. It is no secret that there has been an attempt in various places to lead the American people to believe that the American Medical Association is not representative of the American medical profession, that it is a weakened, disrupted, and failing organization. The actual fact is that the Association speaks today with the greatest membership in its history. During the year 1937-1938 it gained more than 4,000 members, reaching a total of 109,696 in its membership.

The principles and policies which we have thus far established by the American Medical Association do not forbid, nor have they ever contemplated any opposition to a well considered, expanded program of medical service, when the need can be established. Neither is there any fundamental principle or policy which in any manner opposes aid to the indigent or the medically indigent, if their indigency can be established. The principles and policies which the House of Delegates have adopted in the past have been developed with the single purpose of maintaining the quality and standards of medical care.

It is now in the midst of deliberations which will have a vital bearing on medical care of all the people. When these deliberations have been concluded, they will be made public for the information of all the people. The conclusions reached will be dictated by the consideration which has always motivated the physician—the best interests of the patient.

MEDICAL EXTENSION

For four years Mississippi physicians have had the opportunity of receiving instruction in important branches of medicine by way of medical extension courses given in the state. During the past year and a half of this time medical extension teaching has been conducted by Tulane University School of Medicine with the major Mississippi medical organizations co-operating. Two courses have been given, one in pediatrics and the other in syphilology. Both of these subjects are important ones and are particularly pertinent at this time, since great effort is being made to prevent infant deaths and to control the ravages of syphilis.

About 50% of all the doctors in Mississippi have attended some of the courses given, but the hope is that the attendance in the future will be much greater. There is no question but that the statement made at these extension classes that "the men present represent the best in the profession, but some of the men not attending the courses need the work more." It is always true that the best physicians are those who read most, attend meetings regularly and put into practice the best of what they have learned here and there. Physicians should realize that any course which they attend will probably not revolutionize their practices. However, one bit of knowledge obtained each time a meeting is attended or an article read in the medical literature should improve the practice of the conscientious physician.

Extension teaching seems to offer several definite advantages: it makes instruction easy of attainment for the physician, for he does not have to go far to get it; it gives the physician an opportunity to hear authorities evaluate the importance of subject matter already known, and also obtain knowledge of new developments in medicine. This instruction can be obtained by a physician through extension courses without the necessity of leaving his practice for more than a few hours at a time. He also has the opportunity to use the services of the instructor for consultation or for personal conference. It should stimulate the physician to further study, both by reading and by taking other postgraduate work.

Lay talks on the current subject have been given to several thousand people, so that the public may be better able to co-operate with the physicians in their attempts to control disease. These meetings have been particularly valuable and appreciated.

The Division of Medical Extension plans to give at least one course yearly in the state, and some courses already given will probably be repeated by popular demand. The future of extension medical education depends largely upon the interest of the physician. There is no reason why every physician in the state should not be interested in a short medical course yearly for the rest of his life. If the idea of continued medical education were made a definite part of a physician's yearly plan for improving himself, the small amount of money thus invested should be considered well spent. This type of education is an easy method of insurance against medical stagnation.—M. E. L.

COPIED

There was a man who lived by the side of the road and he sold hot dogs.

He was hard of hearing, so he had no radio.

He had trouble with his eyes, so he read no newspapers.

But he sold good hot dogs. He put signs up on the highway, telling how good they were.

He stood on the side of the road and cried, "Buy a hot dog, Mister?" and people bought.

He increased his meat and bun order. He bought a bigger stove to take care of his trade. He finally got his son home from college to help him.

But then something happened. His son said, "Father haven't you been listening to the radio? Haven't you been reading the newspapers? There's a big depression on. The European situation is terrible. The domestic situation is worse. Everything's going to pot."

Whereupon the father thought, "Well, my son's been to college, he reads the papers and he listens to the radio, and he ought to know."

So the father cut down on his meat and bun orders, took down his advertising signs, and no longer bothered to stand on the highway to sell his hot dogs. And his hot dog sales fell off almost overnight.

"You're right, son," the father said to the boy. "We certainly are in the middle of a great depression."

* * * *

FOR PROFESSIONAL SERVICES

Sue: "So Lillie threw over that young doctor she was going with?"

Maybelle: "Yes, and what do you think? He not only requested her to return his presents, but sent her a bill for forty-seven visits."

OBEDIENCE

Timothy, on his ninth birthday, had a party. It was all over, and he was now gazing wistfully at the remains of the cake.

"Mother," he said, "may I have a piece of cake—only a small piece, please?"

"No," replied his mother, "you have had quite enough."

"Well, may I sleep with a bit under my pillow?" asked the boy.

"Very well, here you are and remember to keep it under your pillow. Now run along to bed."

On going up to Timothy's bedroom some time later, his mother was amazed to see him sleeping peacefully with the pillow over his stomach.

* * * *

"Yes, the fish was too small, so I got two niggers to help me throw it back into the water."

MISSISSIPPI STATE BOARD OF HEALTH

A new mark has been reached during the past month in the number of full-time county health departments. With boards of supervisors approving this service in six counties during September, and with citizens of Lafayette County deciding in its favor at the polls September 27, the number of counties to have full-time health departments has been increased from thirty-two to thirty-nine. Counties other than Lafayette where full-time health services will be initiated are: Desoto, Tunica, and four counties in the southern section of the state which next March 1 will start functioning as a health district, George, Greene, Stone, and Perry. Desoto, Tunica and Lafayette counties will begin their services on January 1.

* * *

Approximately 1500 students at State College and the University of Mississippi were given complete physical examinations at the opening of the fall term through the aid of four physicians from the State Board of Health.

Comprised of freshmen, transfers, football players, and foodhandlers, this group was examined for conditions of weight, blood pressure, heart, and lungs, and each was given a Wassermann test, a test for malaria, urinalysis, a tuberculin test, and a chest x-ray where tuberculin test was positive.

Examiners from the State Board of Health were Dr. H. C. Ricks, Director of the State Hygienic Laboratory; Dr. A. L. Gray, Director of Preventable Disease Control; Dr. J. W. Dugger, Director of Industrial Hygiene; and Dr. George W. Riley, Supervisor of Malaria Control.

"These student bodies showed a very high degree of physical fitness," stated Dr. Ricks, "and more of the young men and women entering State College and the University show a history of protection against typhoid fever, smallpox, and diphtheria than ever before. Such demonstrations are considered helpful in educating young Mississippians in the requirements for a healthy body," he declared.

* * *

Of interest to physicians throughout the state is the increasing incidence of diphtheria, according to statistics assembled by Dr. A. L. Gray, Director of Preventable Disease Control. Indications are that the coming fall and winter will bring Mississippi more diphtheria than during the past two years, Doctor Gray states, adding that ever since 1920 an increase in diphtheria has been noted in cycles of about five or six years. Dr. Gray urges that children who have not been immunized against diphtheria should receive protection at once.

* * *

It is a far cry from the time when Lazarus ate crumbs from the table of the rich man to keep soul and his sore, leprous body together. And yet this dread plague is still with us.

Given no publicity at the time in order to protect the lepers' families, two cases of this disease were diagnosed sometime ago in Mississippi, and the lepers immediately committed to the National Leprosarium, Carville, Louisiana.

The facts in this matter are disclosed at this time only to be of service to physicians of the state and to indicate the eternal vigilance necessary against disease of all kinds.

One Saturday morning, information was received at the State Board of Health that the county health officer had reported a case of suspected leprosy which had been diagnosed by an outstanding dermatologist in New Orleans.

As the county health officer had been called out of the county, the patient's family physician was called and the report confirmed. Both the surgeon general and the medical officer in charge at Carville were wired, and arrangements were made for a leper expert from Carville to examine the patient and confirm the diagnosis.

A summary of the report on the investigation reads as follows:

Three suspected cases of leprosy were investigated and two cases were confirmed. The third suspected case exhibited no manifestation or history that would lead to the diagnosis of leprosy, nor did any other members of the family.

The histories and physical findings for each case are given. The first case is well advanced and is of mixed type, while the second case is in the acute stage with marked nerve degeneration and beginning nodular formation.

The two positive cases are brothers. Good evidence, but no proof, leads to the belief that these cases of leprosy were contracted from the father, who had contracted the disease in Mexico or on the Mexican Border. Recommendations were made as follows:

(1) That no publicity be given to the diagnosis of these cases, as such knowledge in the community would lead to unnecessary ostracism of the family.

(2) That the wife and children of Case No. 1 and the sister and any other direct descents of the father of these cases have periodic examinations bi-annually for four or five years.

(3) That some form of disinfection or fumigation be instituted for its psychic effect.

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Announcements regarding the award of post-graduate fellowships to physicians of Mississippi will soon be made, according to Dr. Felix J. Underwood. These fellowships are for a three months' period of study at Tulane University, New Orleans, and will begin early in 1939. Dr. Harry E. Handley of the Commonwealth Fund interviewed physicians September 12 regarding this work. Dr. Handley is Associate, Division of Public Health, The Commonwealth Fund, which organization makes the fellowships possible.

Dr. Robert E. Schwartz, State Teachers College, Hattiesburg, will serve as a member of the Executive Committee of the Mississippi Tuberculosis Association, replacing Mr. J. T. Savage of Jackson, who resigned after serving faithfully for many years. This change in the officers of the Mississippi Tuberculosis Association was the only one made at the Annual Luncheon Meeting of this organization held in Jackson, September 15, and attended by many staff members of the State Board of Health.

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On September 6, Dr. Felix J. Underwood discussed "The Program of the Mississippi Social Hygiene Association" at a meeting of the Central Medical Society in Jackson.

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Dr. Underwood and Dr. H. F. Garrison of Jackson were delegates to a special called meeting of the House of Delegates of the American Medical Association in Chicago on September 16. Dr. Joe E. Green of Laurel, president of the State Medical Association, also attended this meeting, where the National Health Program was discussed. The meeting is reported in the September 24 issue of "The Journal of the American Medical Association," pages 1191-1217. Members of the medical profession will be interested in this report.

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On September 22, Dr. Underwood talked to members of the Cotton Association meeting in Jackson, on the benefits of the works of various organizations in building up the state. "Mississippi should have every advantage offered from an agricultural and health standpoint," he said.

* * *

Dr. Underwood spent September 23 and 24 in Oxford where he was invited by interested citizens prior to a ballot held there September 27 regarding a full-time health department. On the twenty-third he addressed a group assembled at the school auditorium on "New Goals for Public Health Achievement," and on the twenty-fourth he spoke to interested voters at the Courthouse on "The Advantages of a Full-Time County Health Department." As already mentioned, the county voted "Yes" in this issue.

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Changes in health officers have occurred in several counties over the state. Dr. L. H. Eubanks, who was for a short time assistant health officer in Lauderdale County, has been named the new director of the Holmes County Health Department, Lexington.

Dr. Thomas Lon Owings, a native of Alabama, has relieved Dr. R. J. Jones of Pearl River County, who is doing graduate work at Johns Hopkins University. Dr. Owings attended the University of Alabama and received his medical degree from Emory University. He has been engaged in general practice and public health work in Alabama for fourteen years.

Dr. J. W. Dugger of the State Board of Health has relieved Dr. V. B. Harrison of Marshall County, who is on a year's leave of absence during which time he will be assistant professor in the University of Mississippi School of Medicine. Dr. Harrison will teach bacteriology and preventive medicine.

Dr. B. F. Hand of Philadelphia has been named director of the Washington County Health Department succeeding Dr. Geo. R. Mast, resigned. Dr. Hand is a graduate of the University of Mississippi, and the University of Tennessee Medical School. He interned at Charity Hospital in Shreveport.

On September 26 Dr. Underwood attended a quarterly meeting of the Board of Scientific Directors of the Rockefeller Foundation in New York. He also conferred with Commonwealth Fund officials while there.

On September 30 Dr. Underwood attended a meeting of Jasper and Smith County Boards of Supervisors at Bay Springs to discuss full-time health work in these counties. Physicians and schoolmen present at this meeting were enthusiastic in their interest.

* * *

Out-of-state visitors to the State Board of Health during September were Dr. C. C. Applewhite, Regional Consultant, U. S. Public Health Service, Washington, D. C.

Of especial interest to physicians are several facts revealed by Dr. Henry Boswell on September 3, when he presided at the staff Conference of the State Board of Health.

* * *

Pointing out the doubtful value of tuberculin testing, Doctor Boswell said that in one important experiment readings on the same group of people varied in the percentage infected from 15 to 85 per cent when different tuberculins were used. "Tuberculin testing evidently does not give a true representation of infection," he said, "and much more experience is needed in this field."

Doctor Boswell stated that field clinics are a diagnostic, consultative service to physicians and that between 4,000 and 5,000 x-rays and examinations are made every year on patients referred to tuberculosis clinics by their family physicians.

Among the educational features of the Sanatorium is the annual spring stay at the Sanatorium of University medical students. The institution is always open to physicians of the state, Dr. Boswell said, and they come every day to observe some phase of surgery and treatment. Interneship is available without cost.

The Mississippi State Sanatorium was the first tuberculosis sanatorium ever graded by the American College of Surgeons and has been Grade A since 1923.

* * *

Miss Mary D. Osborne, Supervisor of Public Health Nursing, presided at the State Board of Health Conference on September 17. Public health nurses taking part in the conference were Miss Ethel Byrd, who spoke on "Volunteer Service"; Miss O'Connor George, whose talk was on "Hygiene Class Instruction"; and Mrs. Annie Lois McNair, who exhibited the content of the public health nurse's bag.

Dr. Emma Gay, State Commander, Women's Field Army, Biloxi, was a guest at this meeting and spoke briefly on the cancer campaign in Mississippi.

* * *

The WJDX radio program at 9:30 each Saturday morning was as follows during September:

September 3.—Dr. J. A. Milne, Director, County Health Work, "The Need for Full-Time County Health Departments."

September 10.—Dr. D. V. Galloway, Supervisor, Venereal Disease Control, "Syphilis and You."

September 17.—Dr. Emma Gay, Commander, Women's Field Army, Biloxi, "A Woman Physician Talks to Women About Cancer."

September 24.—Dr. J. W. Dugger, Director, Industrial Hygiene and Factory Inspection, "Our Industrial Hygiene Program."

October 4, 1938 Felix J. Underwood,
Executive Officer.

INTERPRETING MEDICAL LITERATURE
GYNECOLOGY and OBSTETRICS
J. F. Lucas, Greenwood

On The Etiology of Cervicitis, Melvin A. Roblee, Am. J. Obst. & Gyn., 35:1039, 1938.—The basis of this study is the histologic response in the cervix to the chemical environment in the vagina. The treatment of vaginitis is replacement therapy by the addition of acid fermentable material to the vagina. The treatment of cervicitis is removal therapy or the structural removal of the gland bearing area of the endocervix. In the cervicitis clinic at Washington University School of Medicine, it was found that simple erosions which are produced by columnar epithelium replace the squamous epithelium about the os, made up one-third of all the cases of cervicitis. This type of cervical erosion was readily eliminated by the use of an acid fermentable material as replacement therapy for a short period of time.

Six types of cervices were studied: 1. Acute cervicitis; 2. Chronic cervicitis; 3. Postpartum cervices at six weeks; 4. Simple erosions; 5. Papillary erosions; 6. Normal cervices. All types were subjected to a constant acid fermentable environment alternating with a constant alkaline environment for periods of one to two weeks. Weekly biopsies were taken before and after these artificially produced conditions. It was found that cervices subjected to a constant environment of pH 6.5 to 7.5 showed columnar epithelial proliferation and an acute cervicitis. Those subjected to a constant environment of pH 4.0 to 4.5 showed squamous epithelium returning to the cervix with a retreat of the columnar epithelium. Though the papillary erosion did not disappear, the simple erosions would disappear in a period of one to two weeks.

The normal endocervix is made up of columnar epithelial lined racemose glands and maintains a pH of 7.0 to 7.5, while the vaginal portion is made up of squamous epithelium and has an acid environment of pH 4.0 to 4.5. This acid environment is produced by desquamation of the vaginal epithelium (esterin action) depositing acid fermentable material for fermentation by the Doederlein bacilli. A vaginal pH of 6.5 to 7.5 causes destruction of the squamous epithelium on the vaginal portion, and the columnar epithelium pushes out into this environment, while vice versa, if the pH be 4.0 to 4.5, the columnar epithelium will retract and the squamous epithelium return. In papillary erosions there is so much hyperplastic tissue that it cannot retreat although portions of it are replaced by squamous epithelium when subjected to an acid medium. This type requires structural removal.

Except in fungus mycosis vaginitis where the pH is 3.5 to 4.0 all infections are associated with a pH of 5.5 to 7.5. In long standing infections associated with Nabothian cysts and marked hyperplasia there is an overproduction of alkaline secretion which makes it impossible for the vagina to maintain its acidity. In time, however, there is complete blockage of the glands, reducing the alkaline secretion and thus allowing the vagina to maintain an acid medium with subsequent return of squamous epithelium. By this time, it is too late to preserve the normal structure of the cervix without removing the diseased gland bearing area. Roblee believes that infection per se is not the primary factor in producing structural changes except that it changes the vaginal pH. To support this belief it is stated that columnar epithelial proliferation has not been seen on the vaginal portion in the mycosis cases, while it has always been present in other acute vaginal infections when the pH is 6.0 to 7.5.

Comment: There appears to be no consistent relationship between cervical infection and erosion. We have all seen cervicitis without erosion and erosion without cervicitis. Dr. Roblee has demonstrated that increased alkalinity is an important environmental factor favorable to the spread of columnar epithelium. Recent work on the physiology of the cervical epithelium reveals little doubt that it undergoes cyclic changes which are very similar to those seen in the endometrium each month. Further research on the histologic response to hormonal factors and the correlation of these findings promises a better understanding of this important problem.

Syphilis in the Pregnant Woman., J. R. McCool, Surg., Gyn., and Obst., 66:441, 1938.—The author states that it is probably that the following statement is too conservative: A woman with a strongly positive Wassermann reaction who becomes pregnant and who does not receive antisyphilitic treatment during pregnancy has only about a 35 per cent chance of giving birth to a living healthy baby. The same woman with adequate treatment during pregnancy has a 95 per cent chance of giving birth to a living, healthy baby. The author's opinions are based on 3,000 cases. Congenital syphilis is always the result of the disease in the mother and its activity in the mother seems to be the determining factor as to whether the fetus will or will not be syphilitic. The diagnosis in pregnant women must, in the large majority of cases, be made from a properly done blood Wassermann test that is positive. A positive test means syphilis. Pregnancy does not cause false positive reactions or many false negative reactions. Implicit faith must not be placed in one negative Wassermann reaction. Careful histories and physical examinations many times will indicate treatment during pregnancy though the Wassermann be negative. A weakly positive reaction demands careful consideration and means more than in the non-pregnant. It is a safe rule to treat pregnant women with positive blood Wassermann reactions during each pregnancy even though prior treatment has reversed the reaction.

Syphilis is transmitted to the fetus from the mother by the placental circulation. Theoretically, there should be placental syphilis with every syphilis baby. This is probably true but often not demonstrable.

The basis of treatment is to protect the child, not to treat the mother's disease. Treatment should begin as early in pregnancy as the diagnosis is made and continue until labor begins. Treatment should be continuous, mild and gentle. If treatment is started early, an alternating course of arsenic and a heavy metal can be used. Arsenic should be the first and the last drug used. If treatment is begun late in pregnancy arsenic and a heavy metal should be used concurrently. He prefers mercury to bismuth.

A negative cord Wassermann is of little value in deciding that a baby does not have congenital syphilis. In his experience it is only the occasional baby who has a positive cord Wassermann reaction that does not develop other manifestations of congenital syphilis. Roentgenograms of the long bones are of great value in diagnosing congenital syphilis in the newborn.

Comment: It is estimated that sixty thousand syphilitic babies are born each year. Many still-births, near term, result from intrauterine syphilis besides a large number of miscarriages after the fourth month. Routine Wassermann test should be done on the first visit of every pregnant woman to her physician. Inquiry as to previous infection and treatment should always be made.

Those interested in this subject should read Gellhorn's masterly exposition of the subject in Curtis' Obstetrics and Gynecology, Vol. 11, page 599.

Oct. 8, 1938.

SURGERY

A. Street, Vicksburg

Tuberculous Peritonitis. — Merle J. Brown, Surgery, 4:185 (August) 1938.—Early experience demonstrated that laparotomy was beneficial to patients suffering from tuberculous peritonitis. The proper treatment is combination of general treatment of tuberculosis and intelligent use of surgery. Surgical treatment has consisted of laparotomy alone, laparotomy with eradication of focus, paracentesis with removal of fluid, paracentesis with removal of fluid followed by injection of air or oxygen. Injection of iodized oil has been recommended.

Savage in 1928 recommended ether anaesthesia for treatment of tuberculous peritonitis, also states that chloroform would give the same results, but gas anaesthesias to a less extent, and that the earlier the anaesthesia is used, the better the results. The author reports five cases, two of which were treated by anaesthesia and laparotomy and three by anaesthesia alone, all with very good results. The anaesthesia was ether or gas-ether. A temporary anoxemia produced by the anaesthesia might be an explanation of the apparent cures. Tubercle bacilli are aerobic organisms and grow best under conditions allowing free access of oxygen and air. The admission of air by laparotomy should enhance the growth of the infecting bacilli. The use of closed ether, chloroform, or nitrous oxide anaesthesia, on the other hand, would produce a temporary anoxemia.

The chemical study of tubercle bacilli yields compounds such as lipoids, fatty acids, acetone soluble fat, and wax. The ether content of the blood during anaesthesia may act as a lytic substance and injure the tubercle bacilli sufficiently to result in improvement of the disease. The author claims these explanations as speculative only. From his experience and that of Savage, it appears that ether anaesthesia is a valuable adjunct in the treatment of tuberculous peritonitis.

The Need of a National Council on Medical Education, Licenture, and Hospitals., Willard C. Rappleye, Annals of Surgery, 108:489 (October) 1938.—Dr. Rappleye reviews the development of medical training, practice and licenture in America under the control of the medical profession. Attention is called to the control in most important European countries by agencies of the state.

With the further development of medical practice and medical specialties, postgraduate training has become increasingly important and, if it is to be successfully conducted, the hospitals of the country must play an increasingly active part.

At present the hospitals of the country are not offering the opportunities for training of internes in surgery and other specialties that they should or could offer. It is recommended that surgeons generally take a greater interest in the operation of hospitals and that a National Council on Medical Education, Licenture and Hospitals should be created from within our present organizations, made up of representatives of the universities, hospitals, practicing profession, special boards, licensing bodies, and public health agencies.

The function of this council would be to study major educational needs of American medicine, to mobilize the best opinions regarding professional training at its several levels, establishing adequate standards for these activities and advising regulatory bodies and governmental agencies on standards, methods, procedures, and areas of action.

Comment: It is of interest that the surgeons of Mississippi have always been most active in hospital affairs. They have been instrumental in the construction and maintenance of the majority of hospitals in the state. Surgeons are well represented at each meeting of the Mississippi State Hospital Association. They seem to be already carrying out the suggestion of the author that surgeons in general should be active in the conduct of our hospitals.

Chronic Subdural Hematoma, Richard G. Coblentz, Surgery, 4:194 (August) 1938.—Some of the literature on this subject is reviewed beginning with the description by Virchow in 1857. The lesion is an encysted clot under the dura easily identified at operation. The subdural sac, with its liquid and clot contents, presents a dark greenish blue appearance through the dura. The sac is usually extensive, covering a large portion of one hemisphere. It may be bilateral. The condition is curable by proper surgery. When the sac is opened, reddish-brown fluid escapes and rusty looking clots, in various stages of liquefaction, may be found. The brain is flattened by the pressure. There is usually a history of a trivial blow on the head, usually followed by symptoms of slight concussion of short duration, and there is prompt recovery from the immediate effects. Several or more weeks may elapse before the lesion reaches sufficient size to cause symptoms. The first symptoms to appear result from increasing intracranial pressure. Headache is usually first and is usually persistent. It increases and is of a throbbing type. Nausea and vomiting may occur. Mental changes are frequent. Relatives notice that the patient becomes dull, inattentive, and forgetful. Personality changes are frequent. Remissions and exacerbations may occur. Late symptoms are stupor and then coma. Even in this late stage, remissions may occur. Fourteen cases of chronic subdural hematoma are reported. Mortality was low and results from surgical treatment good. The symptomatology is extremely variable and misleading. Trauma is the etiologic factor, usually considered trivial at the time of the injury. The lesion is more frequent in males than in females. The diagnosis should be suspected or made if there is a history of slight injury followed by headache, mental changes, stupor, or signs of increasing intracranial pressure. There may be a free interval of weeks or even months following the injury before symptoms appear. Localization of the lesion is frequently impossible by neurological signs alone. Bilateral trephine openings of the skull serve to establish the diagnosis to determine whether the lesion is bilateral and to evacuate the hematoma. When there is a well-organized clot present, it may be necessary to reflect a flap in order effectually to remove the clot. It is not necessary to remove the sac to accomplish cure. Failure of the compressed hemisphere to expand, and vascular changes secondary to the continued compression are the most serious postoperative complications.

Comment: When dealing with a patient presenting vague mental symptoms appearing weeks or months after a trivial head injury, it would be very easy to overlook the fact that the case might be a hematoma such as described above and which is readily curable by surgical treatment. Such a patient might be deprived of the opportunity for cure unless physicians in general are aware of the possibility of chronic subdural hematoma and looking for it when dealing with patients presenting a history of head injury followed by suspicious symptomatology.

Oct. 12, 1938.

PUBLIC HEALTH

Felix J. Underwood, Jackson

The Symptoms, Diagnosis and Treatment of

Undulant Fever, James G. Carr, Illinois Med. J. 73 (June) 1938.—This paper presents quite an exhaustive study especially in reference to methods of diagnosis and treatment. The important laboratory procedures employed for diagnosis include, in addition to the white cell counts, the culture of the organism from the blood, urine, spinal fluid, dermal eruptions or pus of localized abscesses, the demonstration of an allergic reaction, the skin test and the opsonocytophagic test.

Various methods of treatment are discussed with results claimed in each instance. At the present time no specific remedy or scheme of treatment has been established. This study includes a bibliography with forty-two references.

Anorexia in Childhood, J. Keller Mack, Kentucky M. J., 36 (July) 1938.—Anorexia is a distressingly common complaint in childhood. Brenneman says it occurs in at least 50 per cent of a pediatrician's office practice. Like most disorders of function, anorexia may be due to a number of causes. For study these may be classified as follows:

1. Pathological processes — acute infections are almost always accompanied and often preceded by a decrease in appetite. After acute infections the appetite is the last thing to improve and food should not be forced or a dislike may be developed. Physical defects such as infected tonsils and adenoids, carious teeth, sinusitis, anemia, rickets, constipation, etc., may all cause anorexia. Treatment in these cases is only secondary to the treatment of the cause.
2. Physiological factors — the most single cause of loss of appetite in children is a development of a mental attitude against eating on the part of the child. Three types of reaction are most frequently at fault, these being: (a) rebellion against arbitrary authority, (b) gaining through refusing to eat and (c) a psychological loss of appetite through a reduction of hunger contractions in the presence of emotion.
3. Hereditary body type—anorexia is peculiar to a certain percentage of children with the asthenic body type.
4. Deficient intake of vitamins—this is especially true where there is a deficiency in vitamin B intake.
5. Improper health habits—irregular meal times and eating between meals may prevent a child with anorexia from making improvement. Afternoon rest periods and properly ventilated sleeping and living rooms should be insisted upon.

In the treatment of anorexia one or more of the following suggestions carried out may correct the condition:

1. Eliminate, whenever possible, organic disease especially chronic infection.
2. Provide an adequate diet both as to quantity and quality.
3. Do not force food.
4. Relieve parental anxiety about undernutrition.
5. Serve the food without a word about eating it.
6. Have the mother seem anxious to prevent over-eating.
7. Have the child come to the table with clean hands and do not nag about manners.
8. Parents should eat everything they expect the child to eat.
9. Sometimes a reward without seeming to bribe is effective.
10. Establish regular eating habits.
11. Forbid eating between meals.
12. Stay at the table a definite time and then remove the food whether eaten or not.
13. At times a preliminary period of voluntary starvation is effective.
14. Regulate other undesirable behavior and body habits.
15. Tonics and extra vitamins are sometimes useful especially to divert the mother's attention.

Oct. 10, 1938.

ORTHOPEDICS

Thomas H. Blake, Jackson

Scoliosis, S. Kleinberg, Surg., Gynec. and Obst. (October) 1938.—A very good article on this subject has been written by this surgeon. The definition of this disturbance is a deformity of the trunk in which the most conspicuous element is a rotary lateral curve of the spine. The average person thinks of scoliosis as being only a spinal disturbance. This is a grave error. The most visible change is in the spine, but there is a marked disturbance and distortion in the viscera due to the generalized disturbance in the contour of the trunk. There are two types of scoliosis. One is the functional, the other structural. The functional is usually due to a temporary alteration in posture of the patient, and is somewhat of a habit which will develop into a permanent distortion unless corrected. This can usually be improved by encouraging better posture and by some corrective exercises. It will be found on examination that the spine is straight when the patient lies down, but on standing, the curvature is visible. The structural scoliosis is found where there is a significant organic change in the various tissues, and is not uncommonly due to a grave functional visceral disturbance and psychic imbalance. There is always a fixed deformity of the trunk which cannot be voluntarily corrected. About seventy per cent of all scoliosis is of undetermined origin and has usually existed for several years when the patient is brought in for examination and treatment. The majority of the cases are first seen between the ages of ten and fourteen years by the orthopedist, and on the first visit the majority of these cases have a definite fixed moderately well advanced curvature. About eighty per cent of the cases are in females and the remaining twenty per cent are in males. There is no definite reason given for this.

The treatment is to attempt to arrest the curvature as soon as possible and in some instances restore the spine toward its previous normal alignment. Of course, the best results are obtained in those cases which are seen early. The unfortunate part of these cases is that marked deformity is present when they are first seen and this could usually have been minimized had early treatment been instituted. The treatment consists of many types of appliances used in an effort to restore the spine and trunk to a good alignment. The treatment should be used that the operator is most familiar with. Frequently prolonged rest in bed with heavy traction and countertraction is helpful. Application of corrective plaster of Paris casts is good. Braces are frequently helpful. Exercises are only good when carried out consistently for an extremely long period of time. Operation is indicated in many cases to prevent the curvature from progressing or to hold a correction which has been obtained by mechanical measures. (1) It is indicated in all types of scoliosis in which conservative treatment has failed to control the curve. (2) In cases in which there is an unequivocal history of progressive increase of the scoliosis. (3) In paralytic scoliosis. (4) In patients with scoliosis who are suffering from persistent and disabling backache. There is more than one type of spinal fusion which can be done. This should be left entirely to the discretion of the operator depending on his ability to use the various methods.

Comment: This disorder is one which is frequently overlooked and the disabling results of it are frequently underestimated by the physician not familiar with this type of abnormality. Most of the cases are definitely progressive, especially in early childhood. If treatment can be instituted early much relief can be given. Where treatment is begun at a late period only an arrest of the disturbance can be expected, and little if any correction of the deformity can be hoped for.

Oct. 8, 1938.

PATHOLOGY AND CLINICAL PATHOLOGY

E. T. White, Greenville

Endometrial Histology in Relation to Ovarain

Endometrial Histology in Relation to Ovarian Function, Wallace E. Herrell, Am. J. of Clinical Path. (May) 1938.—In this paper the author brings out the importance of endometrial studies in determining abnormal functions of the ovary.

The menstrual cycle is divided into four phases of seven days each; early proliferative phase, late proliferative phase, early differentiative phase and late differentiative phase. The normal proliferative phases occur during the period of activity of the follicular hormones and the differentiative phases are during the period of activity of the corpus luteum hormones.

The endometrium during menstruation sloughs down to the basal glands during the first 24 hours of the period after which an active proliferation of the glands takes place, forming straight tubular glands about three to a low power field. The cells lining the glands are low columnar in type with the nuclei situated centrally. The stroma is loose and scanty. In the late proliferative phase there is still marked active growth of the glands with from six to seven glands to a low power field. They are still tubular with low columnar epithelium but the lumen is a little larger than in the early phase. There is also a marked increase in stroma. The glands do not show any secretory activity. The third phase, or early differentiative phase, the glands become tortuous, the cells develop into columnar type, and the nuclei begin to migrate to the basal portion of the cells. The lumen of the glands becomes enlarged and slightly irregular in outline. In the late proliferative phase the glands become very tortuous and twisted with large lumens and the cells are high columnar with a definite increase of the cytoplasm. There is evidence of active secretory function during this phase. In the latter part of this phase there is engorgement, edema and the appearance of wandering cells, or the premenstrual changes. Even in this stage the number of glands remains six to seven to a low power field.

In making studies of the endometrium for the determination of abnormal ovarian function the best time to obtain the specimen is from the 18th to the 25th day of the cycle. At this time the endometrium should be in the differentiative phase and if it shows the glands in proliferative stage, it indicates a lack of corpus luteum hormone. If the proliferative is not marked, it indicates a deficiency in follicular hormone. For example, say a biopsy is made on the 20th day and we find the endometrium conforming to the pattern of the late proliferative phase, we would know that the corpus luteum has not developed properly and the proper therapy for the patient would be the stimulating hormones or antuitrin S. and prolution. The common changes due to abnormal function of corpus luteum during the differentiative phase is the appearance of large cystic glands, or swiss cheese pattern. The most common symptoms are sterility and some amenorrhea.

Abnormal ovarian function may be primary or secondary to some other endocrine disfunction as pituitary or thyroid. The changes produced in the endometrium are the same, so a careful study of the patient should be made to determine whether the disfunction is primary or secondary.

Oct. 9, 1938.

EYE, EAR, NOSE AND THROAT

Alston Callahan, Vicksburg

Medicine and Aviation.—As we follow each progressive step in the development of civilization and its correlating "impedimenta," we find that it gradually pervades medical literature. Such, for example, was the institution of the motorcar with its various types of injuries from accidents which now occupy an important part of medical consideration. At the present time another new type of transportation is being reflected in the medical journals, and that is in connection with aviation. There are a few articles written on the treatment of injuries received from flying because it is unfortunately true that only a very few of these cases are able to sustain their injuries.

Yet in ophthalmology there is a growing number of articles which have to do with the prophylaxis of accidents, i.e., examinations for air pilots. The reviewer has been recently tested, and although the requirements are unusually severe, he feels that they are easily justified.

Following are three abstracts for current medical literature, which give a good cross section of those now appearing in ophthalmological discussion.

Ophthalmology in Aviation, Frederic H. Thorne, Arch. Ophth. (Feb.) 1938, p. 253.—

In order for a pilot to operate any type of aircraft safely and efficiently, his combined visual elements must function in a manner to insure full visual efficiency without undue nervous or muscular stress. He must be able to regain his senses of equilibrium and position quickly when these are confused after rapid gyrations and while he is in positions to which his body is not accustomed.

1. **Acuteness of Vision.** As in many other vocations, a high standard of acuteness of vision is necessary in aviation to attain full efficiency in the performance of duties to which the person may be assigned. However, in aviation there is an additional importance attached to acuteness of vision. Not only must the flier see objects clearly, but he must be able to locate them accurately as to positions and in their relations to one another. His accuracy in judging distance is dependent, in part, on his acuteness of vision.

2. **Efficiency of the Extra-Ocular Muscles and Binocular Single Vision.** Binocular single vision cannot be maintained without ocular stress unless the extra-ocular muscles and fusion control function efficiently. Heterophoria is the most common functional defect encountered in the examination of rated and prospective fliers, and reduced power of convergence is the second most common defect.

3. **Depth Perception.** Depth perception is an element of vision that must function efficiently if the pilot is to continue flying and retain his health. In importance it must be considered as equal to acuteness of vision. It is this element of vision that enables the flier to level off his ship at the proper distance from the ground when making landings; to take off with the necessary margin of safety over trees, buildings, fences and other obstructions, and to fly in close formations and take part in aerial combat when engagement of enemy ships at close quarters is necessary.

4. **Color Vision.** Accurate and rapid discrimination of colors becomes important to the flier when selecting emergency landing fields, recognizing colored signal lights, navigation lights, lights denoting the limits of landing fields, and daylight panels, and in reading colored maps. In selecting landng fields the character of the terrain may be determined to an important degree by its color.

Orthoptic Training For Aviators, Capt. A. H. Schwichtenberg, Amer. J. Ophth., (Sept.) 1938.—Generally speaking, for the past several years one of the most common physical defects in air corps officers as well as in other flyers which require either a waiver of actual cessation of active pilot duty is in some way or other associated with the eyes. This paper is the report of a series of studies on air pilots, and it is found that in them, defective depth perception, heterophorias, deficient angle of convergence, and deficient prism divergence are largely but not invariably correctable by the intelligent use of orthoptic equipment commercially available.

Certainly aviators constitute an ideal group for the correction of the aforementioned defects because of their vital interest. The correction of these defects is considered entirely feasible as well as an economical procedure.

Orthoptic equipment now commercially available (such as the stereoorthopter, the rotoscope, and the tel-eye-trainer) offers great possibilities from the standpoint of developing new tests for the measurement of the eye functions and the simplification of present tests.

Testing Fitness for Night Flying: Visual Activity, C. E. Ferree and G. Rand.—Visual acuity sustains an important but as yet unknown relation to sensitivity to light. In the testing of night flyers it is important, therefore, to determine not only their sensitivity to light but their power to see objects or to discriminate detail at low illumination and the effect of dark adaptation on this power. The problem of testing as to fitness for night flying is somewhat similar to that of testing as to fitness for the lookout service at night on the bridge of a battleship, for there is the same need of unusual ability to see at low illumination and of unusual power of dark adaptation.

The speed of adaptation seems to be more important than the amount, for the night flyer needs especially the power to change his vision quickly from the illuminated cockpit and instrument panel to the outside world and back again.

Two functions are involved in the ability to see, namely, the ability to sense light, or to discriminate differences in light and brightness, and the ability to discriminate detail, or form. Either of these may be used in testing the ability to see at low illumination and the effect of dark adaptation on this ability. Tests are described in which visual acuity at low illumination is used for this purpose and for testing the amount and speed of dark adaptation.

October 12, 1938.

PEDIATRICS

Harvey F. Garrison, Jackson

The following abstract, at this time, it would seem, would be very timely. It is true that we have not had as many cases of the respiratory variety of poliomyelitis this as of last year, but after all we have had far too many. We are very fortunate in having two of the latest type Drinker respirators installed in one of the buildings of the old Insane Asylum here in Jackson. This is being used as a polio clinic. The respirators have come in very nicely in two cases already, which after all, is well worth the price paid for them. It is worth the price of the machines to the physicians and the patients who have polio cases, to know that there is a place that is at least partly equipped, where such cases may be referred when necessary.

It is to be hoped that the Commission will realize the great need for allocating sufficient funds for the establishment and equipment of an isolation or contagious disease annex to the present State Charity Hospital in Jackson, for the purpose of caring for such cases as this and others that are not wanted nor taken in by the other hospitals. It will be remembered that the Mississippi State Medical Association went on record as favoring and urging the establishment and equipment of this annex. The committee appointed by the president of the Mississippi State Medical Association has brought this matter to the attention of the governor and the legislature and also to this commission. The W. P. A. has agreed to furnish all necessary labor. The state will only have to buy the material in order that we may be equipped to take care of such cases as is necessary in such an annex.

I trust that every physician in the State of Mississippi will read this abstract.

Poliomyelitis With Special Reference to the Drinker Respirator Therapy, Albert V. Stroesser, and Wallace S., Sako, Minnesota Medicine 21:455 (July) 1938.—"Recent small epidemics of acute anterior poliomyelitis in Minnesota appear to reveal an increasing incidence of cases with respiratory difficulty. The respirator devised by Drinker and McKhann has been found to be of great help to the patients with difficult breathing. However, all patients are not benefited to the same extent.

"Proper selection of the patients is essential. This is especially important in epidemic periods when the number of Drinker respirators available is less than the demand."

In selecting cases for Drinker respirator therapy the following classification has been found to be of great assistance:

"Spinal cases—spinal cases in which there is a direct paralysis of the muscles of respiration innervated by the nerves from the dorsal and cervical spinal cord. The intercostal muscles, the diaphragm, or both are involved. Paralysis of the intercostal muscles is determined by watching the expansion of the chest during inspiration. The magnitude of expansion is more readily estimated by pressing firmly on the upper abdomen, thus diminishing the excursion of the diaphragm. Paralysis of the diaphragm is determined by observing the movement of the abdominal wall during inspiration. If there is no abdominal movement, or if the abdomen is drawn inward during inspiration, it indicates weakness or paralysis of the diaphragm.

"The individual with spinal respiratory paralysis usually advances to the stage where he lies in bed motionless, the eyes having a fearful stare. The face is dusky and the lips are cyanotic. The alae nosi dilate with every inspiration and the accessory muscles of respiration. The chest and the abdomen become practically vibrationless. The patient cannot sleep but when he is placed in a Drinker respirator the response is usually dramatic. The cyanosis disappears and the face assumes its natural color. The facial expression is that of satisfaction. After the patient's breathing and the respirator become synchronous, the individual falls into a deep sleep which may last many hours."

Bulbar cases—bulbar cases in which there is involvement of the nuclei of the cranial nerves with apparent injury of the respiratory center. The damage to the bulbar nerves supplying the muscles of the pharynx and the larynx is often ushered in by a nasal quality of the voice, by choking attack or by regurgitation of fluids through the nose. Various grades of aphonia and impaired ability to cough or swallow are present. Advanced cases may be heard breathing with an ominous gurgling in the throat. Attempting to swallow causes a choking attack. Secretions around the glottis which seem to prevent deep inspirations cause the breathing to simulate paralysis of the respiratory muscles. Deep inspirations tend to aspirate fluid into the larynx and are frequently interrupted by a forced expiration. However, extreme irregularity of breathing, both as to depth and rhythm, is an indication of damage to the respiratory center." October 4, 1938.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION: Seventy-Second Annual Session and Thirty-Sixth Annual Session of the House of Delegates, Gulfport, May 9, 10, 11, 1939.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday, each month, Natchez, 7:30 p. m.

Amite County Medical Society: W. S. Stewart, Oskya, president; D. H. Thornhill, Crosby, secretary. Meets second Thursday, each month with Wilkinson County Medical Society, Field Memorial Hospital, Centreville.

Central Medical Society: J. T. Rainer, Yazoo City, president; Lawrence W. Long, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. D. House, Sledge, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: William P. Warfield, Clarksdale, president; N. C. Knight Clarksdale, secretary. Meets second Wednesday each month, Alcazar Hotel, Clarksdale, 12 noon.

Coast Counties Medical Society: W. W. Lake, Pass Christian, president; D. L. Hollis, Biloxi, secretary. Meets first Wednesday, each month at night.

Delta Medical Society: C. W. Patterson, Rosedale, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

Desoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4, Memphis, secretary. Meets first Monday of January, April, June, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Harrison, Philadelphia, president; Bob A. Cameron, Meridian, secretary.

Franklin County Medical Society: C. A. Everett, Bude, president; L. Costley, Meadville, secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: B. B. Martin, Jr., Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Mississippi State Charity Hospital, Vicksburg, 7 p. m.

Marshall County Medical Society: C. R. Senter, Byhalia, president, Herbert Phillips, Holly Springs, secretary. Meets second Thursday each month, alternating between Byhalia and Holly Springs.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary.

North Mississippi Medical Society: R. M. Adams, Ripley, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen-County Medical Society: Dr. R. J. Brown, Iuka, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September, December.

Pike County Medical Society: E. M. Givens, McComb, president; T. Paul Haney, Jr., McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Sunflower County Medical Society: U. S. Wasson, Moorhead, president; H. B. Cottrell, Indianola, secretary.

Tallahatchie County Medical Society: G. Lacy Biles, Sumner, president; G. D. Hightower, Webb, vice president; J. E. Powell, Charleston, secretary.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: R. B. Zeller, Hazlehurst, president; J. C. McGuire, Hazlehurst, secretary. Meets June 14, Walthal Hotel, Tylertown; September 13, Riverside Hotel, Monticello; December 13, Whitworth College, Brookhaven, 12:30 p. m.

Webster County Medical Society: E. F. Arnold, Bellefontaine, president H. K. Curry, Eupora, secretary.

Wilkinson County Medical Society: C. E. Catchings, Woodville, president; E. M. Butler, Centreville, secretary. Meets second Thursday, each month, with Amite County Medical Society, Centreville.

Winona District Medical Society: T. J. Brown, Grenada, president; S. B. Caruthers, Grenada, secretary.

OCTOBER MEETING OF THE CENTRAL MEDICAL SOCIETY AT EDWARDS HOTEL October 4th, 1938

Supper 6:30 p. m

Tuesday

The Special Called Meeting of the House of Delegates of the American Medical Association was held in Chicago, September 16. Drs. Garrison and Underwood, delegates from our State Association, attended and reported the progress made there.

—Program—

Case Reports: "Cement Dermatitis With Allergic Manifestations."—Robert P. Vincent, Yazoo City.

Papers: "Protomine Zinc Insulin in the Treatment of Diabetes Mellitus.—L. Tate Carl, Jackson. Discussion opened by Gayden Ward and Lee Lipscomb.

Report: Special Called Session House of Delegates, American Medical Association, Chicago, September 16, 1938.—Felix J. Underwood, Delegate. Discussion opened by H. F. Garrison, Sr., Delegate.

Jackson, Lawrence W. Long,
Oct. 1, 1938 Secretary.

COAHOMA COUNTY MEDICAL SOCIETY AND CLARKSDALE HOSPITAL MEDICAL STAFF

The meeting was called to order in the dining room of the Alcazar Hotel immediately after lunch, October 12. Minutes of the previous meeting were approved as read.

It was agreed that inasmuch as the regular meeting of the Clarksdale and Six Counties Medical Society conflicts with the meeting time of this society next month, the November meeting will be postponed until December.

A motion picture entitled "Thyroidectomy in Detail" was then shown.

There being no further business the society adjourned.

Clarksdale, N. C. Knight,
Oct. 12, 1938. Secretary.

EAST MISSISSIPPI MEDICAL SOCIETY

Co-operating With

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

Lamar Hotel, Meridian

Thursday, October 13, 1938

PROGRAM

10:00 a. m. Dr. Henry W. E. Walther—"The Diagnosis and Treatment of Prostatic Diseases."—Lantern Slides.

11:00 a. m. Dr. John T. O'Ferrall—"Low Back Ache Due to Trauma."—Lantern Slides.

12:00 a. m. Dutch Luncheon—Round Table Discussion of Papers Presented in Blue Room, Lamar Hotel.

2:00 p. m. Dr. Roy E. de la Houssaye—"The Thymus Gland."—Lantern Slides.

3:00 p. m. Dr. Allan Eustis—"Typhoid Fever."—Lantern Slides.

3:00 p. m. Dr. Neal Owens—"Some Basic Principles of Plastic Surgery As Applied to General Practice."—Lantern Slides.

Meridian, Bob A. Cameron,
October 4, 1938 Secretary

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Vicksburg, Tuesday, October 11, with Dr. B. B. Martin, Jr., president, presiding and nineteen members and five guests present. After a supper served at 7:00 p. m., the following program was presented.

Diseases of Nutrition—Dr. Henry B. Goodman, Anguilla, Chairman.

(1) Nutritional Diseases of the Eye, Ear, Nose and Throat.—Dr. Hugh H. Johnston, Vicksburg.

Discussed by Drs. Alston Calahan and W. P. Roberts. Dr. Johnston closed.

(2) Nutritional Factors in Heart Disease.—Dr. T. E. Wilson, Jackson.

Discussed by Dr. W. K. Purks. Dr. Wilson closed.

Case Report: Pregnancy in a Midget with Deformities of the Spine and Pelvis; Living Baby.—Dr. A. J. Messina.

Discussed by Dr. F. M. Smith.

Dr. B. A. Stafford ,Rolling Fork, was elected to membership.

The report of the out-patient clinic operated under the direction of the Society showed 1581 patient visits for the month of September. These were divided by services as follows: medical, 182; surgical, 191; obstetrical, 45; gynecological, 99; eye, ear, nose and throat, 94; orthopedic, 15; pediatric, 25; genito-urinary (venereal 660), 707; admitted to hospital, 223. Patients came from fifteen counties of the state and seventeen were from out of the state.

The next meeting of the Society will be held Tuesday, November 8th, at 7 p. m. The subject will be Roentgenology and Radiology and the program will include:

1. The Results of X-Ray Therapy on the Leukemias.—W. R. Bethea, Jackson.
2. Selected Roentgenologic Studies of Heart Disease.—W. K. Purks, Vicksburg.

The committee in charge consists of Drs. J. L. Hall, Chairman; G. P. Sanderson; G. M. Street; W. E. Johnston.

DESOTO COUNTY

The autobiography of Dr. C. M. Hammond in this column is very interesting. Dr. Hammond has been an indefatigable worker and we hope deserved success is within his grasp.

We asked our good friend, Dr. Albert Vernon Richmond of Lake Cormorant, for some good news for this column; he replied nothing this month but maybe something very important next time. We wonder what this good news can be. Has the doctor succumbed to the inevitable or has he decided to take a trip or is there something more significant to take place?

We were shocked recently to learn of the death of two friends, Drs. A. P. Alexander of Como and Thomas J. Brown of Grenada. Dr. Alexander married a Miss Lauderdale of this county and he had many friends here; he served for several years on the Council with Dr. Brown. Both were true and tried men and will be missed; they fought a good fight and kept the faith. Peace to their ashes.

In the list of recent graduates from the University of Tennessee Medical Department, was Hiram Robinson Elliott, Jr., of Courtland, son of Dr. Elliott. I know Elliott is proud to have his boy to follow in his footsteps.

The 28th semi-annual meeting of Delta Medical Society will convene in Indianola October 12. The program is, as usual, a good one. We wish we could be present. Dr. C. W. Patterson of Rosedale is president and Dr. F. M. Acree of Greenville is secretary.

The New Orleans Graduate Medical Assembly will hold its third annual meeting February 6, 7, 8 and 9, 1939, at the Roosevelt Hotel. Make arrangements to attend.

Dr. O. C. Brewer of Robinsonville was in Memphis recently on private and professional business.

If you have any news for this column please send it in. Thanks.

Rt. 4, Memphis, Tenn. L. L. Minor,
Oct. 12, 1938. County Editor.

AN AUTOBIOGRAPHY OF DR. CHARLES MORGAN HAMMOND AND BRIEF HISTORY OF MY RESPIRATOR

I was born at Bridgeport, Ala., Feb. 26, 1878, and received my education at a private school and the Bridgeport College. I graduated at the old Memphis Hospital Medical College and the University of Tennessee in 1902. Have practiced my profession in the Memphis territory since. I have an office at Walls and my home in Memphis, Tenn. I have a wife and two children, a boy and a girl. I am always interested in the advancement of my profession and all civic matters. I am a Mason.

Leading up to my work with the respirator, I was an interne at the General Hospital in Memphis when I developed adhesions of the pleura which gave me more or less pain with every breath for several years. With a little cold, or heavy atmospheric conditions, breathing became more difficult. The idea occurred to me if I could only relieve the atmospheric pressure on my chest, and if this could be done, what would be the results?

Physiologists said this would not be feasible, might, in fact, be dangerous to the respiratory center. I did not concur in this and in 1903 with the help of a plantation carpenter, built a box about like a bee gúm with hand bellows attached and an arrangement of bands to fit airtight around the neck and torso. To the amazement of my carpenter friend and somewhat to my own surprise, he could make me breathe as he opened and closed the bellows. This produced no uncomfortable sensations.

Being busy with practice, it required about six years to develop the first motor-driven respirator which history records. About 1912 this machine was first used clinically in a morphine poisoning case.

From time to time defects in mechanism and development of other aspects of the machine required building different types until the present respirator, now being built, will not only be used as a respirator, but for much clinical work and investigation, I believe will be most valuable in the pneumonias. This work has required a large part of my life's effort. I am firmly convinced of the truth of the old adage, "Labor omnia vincit."

—Charles Morgan Hammond.

LEFLORE COUNTY

Dr. and Mrs. Mayo Flynt, Newton, visited relatives in Schlater, Sept. 1.

Dr. and Mrs. O. E. Ringold, Cleveland, were injured in an automobile wreck at Schlater, Sept. 4. Mrs. Ringold was brought to Greenwood Leflore Hospital with a fracture of tibia above the ankle. The doctor's injuries were slight, and he returned home that night.

Drs. T. M. Riddell, Swiftown, and B. B. Harper, Itta Bena, spent September in Nashville at Vanderbilt, taking the special course in venereal diseases.

Among the visiting doctors to Greenwood during September were: Drs. W. I. Ervin, Inverness; H. L. Scales, Starkville; T. J. Barkley, Isola; Bostick, Indianola; C. N. Pate, Hot Springs, Ark., and Kelly of Sidon.

Dr. and Mrs. E. N. Murphey, Macon, visited their son, Mr. C. H. Murphy at Itta Bena.

Dr. E. R. Shurley, Money, has gone to Brookhaven to practice. We are sorry to lose Dr. Shurley from our county.

Dr. W. E. Denman and family visited relatives in Memphis and Arkansas Sept. 18.

Dr. Walter D. Wilson, Schlater, died at his home Sept. 23, after a long illness, and was buried at the old McNutt cemetery. He was 68, and a good doctor, and we will miss him.

Dr. R. B. Yates spent Wednesday on the Mississippi Coast trying to catch fish. His two dentist friends, Drs. E. P. Yates and Henry Kennedy, also failed to extract them, and they all came home after getting sea sick.

Dr. and Mrs. R. E. Wilson and children spent a few days in Guntown recently, with the doctor's father and his family.

Greenwood, W. B. Dickins,
Sept. 1, 1938 County Editor.

HOSPITAL STAFF TRANSACTIONS

MISSISSIPPI STATE HOSPITAL ASSOCIATION, Tenth Annual Session, Gulfport, May 8, 1939.

Aberdeen Hospital: Third Monday, each month, 7:00 p. m.

Anderson Infirmary: First Friday, each month, 6:30 p. m.

Biloxi Hospital: First Thursday, each month, 7:30 p. m.

Bramlett Hospital: Third Wednesday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 12:00 noon.

Field Memorial Hospital: Second Thursday, each month, 6:30 p. m.

Gilmore Sanitarium: Third Thursday, each month, 8:00 p. m.

Greenwood-Leflore Hospital: First Thursday, each month 6:30 p. m.

Grenada Hospital: Second Tuesday, each month, 6:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month, 7:30 p. m.

Holmes County Community Hospital: Second Thursday, each month, 7:00 p. m.

Houston Hospital: Last Thursday, each month, 7:30 p. m.

Ivy Hospital: First Monday, each month, at 7:00 p. m.

Jackson County Hospital: Second Thursday, each month, except July and August, 7:00 p.m.

Jackson Infirmary: Last Tuesday, each month, except three summer months, 7:00 p.m.

King's Daughters Hospital, Brookhaven: First Tuesday, each month, 7:00 p. m.

King's Daughters Hospital, Greenville: First Wednesday, each month, 7:00 p. m.

King's Daughters Hospital, Gulfport: Third Thursday, each month, 8:00 p. m.

King's Daughters Hospital, Yazoo City: First Monday, each month, 7:30 p. m.

Macon Hospital: First Tuesday, each month, 7:30 p. m.

Magee General Hospital: Twenty-fifth each month, 7:30 p. m.

Mayes Hospital: First Monday, each month, 2:30 p. m.

McComb City Hospital: First Tuesday, each month, 6:00 p. m.

McComb Infirmary: Second Thursday, each month, 7:00 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Mississippi State Hospital, Vicksburg: Third Tuesday, each month, 7:00 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

New Albany Hospital and Clinic: Second Tuesday, each month, 8:00 p. m.

Newton Hospital: Second Thursday, each month.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Oktibbeha Hospital: Last Thursday, each month, 7:30 p. m.

Oxford Hospital: Last Monday, each month.

Pontotoc Clinic: First Tuesday, each month, 7:30 p. m.

Rush's Infirmary: First Friday, each month, 7:30 p. m.

Scott County Hospital: Third Wednesday, each month.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

Tylertown Hospital: Second Thursday, each month, 7:00 p. m.

U. S. Veteran's Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:30 p. m.

VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Monday, October 10, and after a supper served at 6:30 p. m., was called to order by the president, Dr. Leon S. Lippincott, with eleven members and two guests present. The program included:

Reports from the Records Department and Analysis of the Work of the Hospital.

Special Case Reports:

1. Multilocular Ovarian Cyst.—Dr. J. A. K. Birchett, Jr. Discussed by Drs. F. M. Smith, W. E. Johnston, R. A. Street, Jr., and G. M. Street.
2. Idiopathic Purpura.—Dr. L. J. Clark. Discussed by Drs. G. M. Street, J. A. K. Birchett, Jr., and H. H. Johnston.
3. Dysentery Due to Morgan's Bacillus.—Dr. R. A. Street, Jr. Discussed by Drs. G. M. Street, J. A. K. Birchett, Jr., and L. S. Lippincott.

Report of Vital Statistics.—Dr. F. Michael Smith, Director, Warren County Health Department.

Demonstration of Selected Roentgen Ray Studies.—Subdeltoid bursitis; pulmonary abscess (two cases); pulmonary tuberculosis; carcinoma of lungs, metastatic from breast; cholelithiasis; renal calculi, bilateral; duodenal ulcer; situs inversus.

The next staff meeting of the staff will be held Thursday, November 10, 1938, at 6:30 p.m.

ABSTRACT: MULTILOCULAR OVARIAN CYST

J. A. K. Birchett, Jr., M.D.

Patient.—Colored female, age 37, church organist.

Present Complaint.—Swelling of abdomen.

History of Present Complaint.—Four years ago noticed lump in the right side of the lower abdomen which, since that time, has gradually become larger and larger. Though not painful, she is quite uncomfortable, and there is sensation of distension and pressure. She is unable to draw the legs up on the abdomen and is extremely short of breath because of the pressure. Because of the enlargement, she has been going to her local physician, who, according to her statement, has been tapping the abdomen and drawing fluid but, after a week or two, the tumor again assumes its former proportions. There has been no cough, no edema, nor any evidence which suggests that the swelling is due to any circulatory disturbance. There have been no sweats or fever or loss of weight which would be suggestive of tubercular peritonitis. There has been marked constipation and the stools have been of ribbon-like character, or small defecations, but no blood. This is probably due to the extreme pressure on the colon and the sigmoid. There has been no history of any menstrual cycle since she was operated upon in 1925 when, in this clinic, she had a subtotal hysterectomy for fibroids weighing nearly ten pounds. A right ovary was permitted to remain which, at that time, was apparently normal.

Past History.—Usual childhood diseases. Regular menstrual cycle, which began at the age of fourteen and was stopped at the age of 24 following removal of a tumor. She has never had any pregnancies. General physical condition has been good.

Family History.—Mother died of cancer of the breast and one uncle died with tuberculosis, but she did not live in the same environment with this member of the family.

Physical Examination.—A fairly-well developed, but slender, negro female of middle age. There was apparently an unusual swelling of the abdomen, the protrusion of which could be identified under the clothing. Nose and throat normal. Oral hygiene good, many gold inlays in teeth. Tonsils atrophic; thyroid negative. Heart rate, 88. Blood pressure, 120/90. Heart showed no murmurs or evidence of circulatory disturbance. The lungs were negative. The abdomen was enormously distended, apparently of hay stack type. Fluctuation could be obtained on palpation. There was a long midline scar of the previous operation which was considerably stretched due to the intra-abdominal pressure. The abdominal wall was so tight that it was impossible to make out any masses. Pelvic examination showed an atrophic button-like cervix with no ulceration, and the pelvis was filled with a firm mass. The external genitalia were negative. Catheterized specimen of the urine was clear. The skin was normal. There was no evidence of any edema of the lower extremities.

Clinical Laboratory.—Urine essentially negative. Sedimentation index 26 mm. and sedimentation time 2 hours. Serology negative for syphilis.

Procedure.—Patient was admitted and a tentative diagnosis was made of ovarian cyst. Prepared for surgery by administration of glucose and rest in bed for 48 hours. Following the sedimentation being found normal, exploratory laparotomy was done under cyclopropane anaesthesia. On opening the peritoneum, it was found that the intra-abdominal mass in the peritoneum were fused at the region of the midline which was possibly due to the several paracenteses which the mass had had. A large incision was made so that the hand could be passed into the abdomen and careful exploration of the mass for adhesions to the bowel and the liver done before any attempt was made to evacuate it from the peritoneal cavity. There were many adhesions, which were separated by blunt dissection with the hand without any great loss of blood. The cyst was of a multilobular type, and it was necessary to drain several pockets of fluid before the tumor mass was of size which could be withdrawn from the abdomen. Approximately four gallons of fluid were evacua by the trocar and suction, and then, after the tumor was delivered, a large amount of fluid was permitted to escape through the opening in the cyst wall before the mass could be handled, so that the pedicle could be isolated and ligated. The mass had originated from the right ovary, which had been left at the previous operation, and the pedicle was easily ligated and all raw surfaces were peritonealized, burying the stump of the pedicle. The abdomen was closed without drainage.

Subsequent.—The convalescence was rather uneventful, the shock being remarkably slight following the rapid relief of so much intra-abdominal pressure. The patient was discharged on the fifteenth postoperative day. The pathological report showed an ovary weighing 17½ pounds, this weight being after the removal of at least between four and five gallons of fluid from within its wall. The diagnosis was pseudomucinous multilocular cystoma.

ABSTRACT: DYSENTERY DUE TO MORGAN'S BACILLUS

R. A. Street, Jr., M.D.

Patient.—Colored, male, 64, farmer, admitted to the Sanitarium Sept. 14.

Present Complaint.—Abdominal pain, diarrhea, fever, and malaise for the past week.

History of Present Complaint.—Illness began with abdominal pain, diarrhea, fever and malaise. This continued for the next few days, and patient began to lose his appetite and also began to lose weight rapidly. For the past 24 hours, he has noted a bloody diarrhea, increasing weakness, continuous fever and abdominal pain. He has not vomited much, but has very little desire for food, and anything that he does take seems to itensify diarrhea thereafter.

Past History.—Had transurethral resection of prostate gland in the fall of 1935 and gradually improved after the operation, until, at present, he has no complaints relative to the prostate gland. He was given typhoid vaccine about eight weeks ago, completing the course about six weeks ago.

Physical Examination.—An acutely ill negro who was dehydrated and toxic in appearance and appeared to have lost considerable weight. Temperature 100.8°F; pulse 92; respiration 20; blood pressure 140/90. Eyes showed a slight icteric tint in the sclera. Pupils were equal and regular and reacted to light. Lungs clear. The abdomen was scaphoid and there was marked tenderness over the entire lower abdomen. No masses were palpated. Spleen was not palpated and liver was not enlarged. There was no rigidity of the abdomen. Genitalia normal. Rectal examination showed the prostate gland to be only moderately enlarged and not very tender or boggy. The extremities were normal, except for moderate emaciation. Reflexes were normal.

Clinical Laboratory.—Leukocytes 14,800 with normal differential count. Urine did not show anything remarkable in voided specimen. Widal test for typhoid showed agglutination, 1-plus in 1-160 dilution and 2-plus and 3-plus in the smaller dilutions. The slide agglutination test was similar, except the 1-320 dilution showed 1-plus, and 1-160 showed 3-plus agglutination. This was not considered diagnostic. The specimen of stool was obtained the next day and sent to the laboratory for examination and culture. It showed 4-plus occult blood and numerous fresh blood cells; otherwise not remarkable in the macroscopic and microscopic examination. The culture report was not complete at this time.

Treatment.—Given 1000 c.c. of 5 per cent glucose solution intravenously at the time of admission and put on a non-residue diet and typhoid precautions with one dram of chlorine water t.i.d.

Course.—Stools continued to be loose and bloody for several days, but appetite rapidly began to improve and felt better. Temperature ranged from 98.6° to 100.6° F. September 17, culture of feces showed a profuse growth of Salmonella morgani. Condition at this time was greatly improved, and all food and liquids were taken. He was kept in the hospital until Sept. 20, at which time his condition was considered sufficiently improved to transfer him home. Proper precautions were given him regarding disposal of feces and advice to continue on chlorine water and non-residue diet. He has not been in the clinic since, but his employer informs me that he is getting along well at the present time.

WOMAN'S AUXILIARY

TO THE MISSISSIPPI STATE MEDICAL ASS'N

President	Mrs. John B. Howell Canton
President-elect	Mrs. Hugh Johnston, Jr. Vicksburg
1st Vice President	Mrs. C. C. Hightower Hattiesburg
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MRS. JOHN HOWELL ENTERTAINS

At the call of our energetic president, eighteen members of the Executive Board, two guests, Mrs. Stowers of Natchez and Mrs. McCool, president of the American Legion Auxiliary, and Dr. Joseph E. Green, president of the Mississippi Medical Association, and Dr. R. H. Cranford of Laurel, met in the spacious home of Dr. and Mrs. John B. Howell at Canton, Thursday, October 20.

MRS. JOHN HOWELL
President of the Woman's Auxiliary

Dr. and Mrs. Howell and son, Dr. Howell, Jr., were such gracious hosts at a most enjoyable luncheon that the occasion will be long remembered by all who were fortunate enough to be present.

The rooms were beautifully decorated with autumn flowers in all their gorgeous coloring and the tables held reminders of the annual convention at Gulfport next year. Hand painted placecards made with sea-shells, and the table centerpiece, a ship in full sail on a sea of glass. all bore the slogan "Gulfport in the Spring."

Dr. Green brought two definite requests to the Auxiliary, included in the work undertaken by the Association this year: First, he asked the co-operation of the Auxiliary in enlightening the laity on the dangers of common use of barbarturic acid compounds and aiding the profession in procuring the passage of a bill regulating the sale of these preparations, also a Pure Food and Drug Act for Mississippi. Next, he requested that the local auxiliaries assist toward a more accurate recording of vital statistics records. Through negligence and carelessness on the part of family or undertaker, many cases of death have been reported unattended by a physician when they had received adequate attention during their illness. Occurrences like this are so unjust to the profession that not comment, but correction, is needed.

The board enthusiastically endorsed both these requests and they will be worked out through the proper committee.

It was also agreed that the Auxiliary cooperate with the Tuberculosis Association during the Christmas Seal Sale by using a few approved short talks on the prevention of tuberculosis and the value of the Seal Sale, in the various clubs of the state from Thanksgiving to Christmas. These will be sent out from the office at Sanatorium to the various auxiliaries.

Dr. Cranford, a member of the Advisory Council, gave endorsement to the plans, as had Dr. Underwood who was prevented from attendance by a speaking engagement in another part of the state, as had also Dr. Wall another councilor who with our historian, Mrs. Wall, were in New York attending the American Surgical Association. Mrs. Temple Ainsworth, fourth vice president was also in New York with Dr. Ainsworth, who becomes a new member of American Surgical at this session of the association.

Those in attendance beside those mentioned were Mrs. Hugh Johnston, Mrs. Leon S. Lippincott, Mrs. L. J. Clark all of Vicksburg. Mrs. W. C. Pool of Cary, Mrs. Henry Boswell of Sanatorium, Mrs. W. H. Anderson, Booneville Mrs. Adna G. Wilde, Mrs. F. E. Rehfeldt, Mrs. H. C. Ricks, Mrs. F. L. Van Alstine of Jackson, Mrs. H. E. Frizell, Vaughan, Mrs. E. C. Elmore. Durant, Mrs. W. K. Stowers, Natchez, Mrs. E. C. O'Cain, Winona. From Gulfport there were Mrs. Dan. J. Williams, Mrs. M M Snelling, Mrs. E. G. Parker and Dr. Emma Gay.

FROM SEPTEMBER ISSUE OF A. M. A. AUXILIARY NEWS LETTER

The inaugural address of the president of A. M. A. Auxiliary at the last convention bears so directly on the policy and activities of the Mississippi Auxiliary this year that we are printing parts of it in THE MISSISSIPPI DOCTOR so that all members may receive the forceful message.

"Our organization is without parallel as an Auxiliary body in its opportunity to serve, not only the medical profession, but mankind, in the bringing about of that greatest of all human assets—GOOD HEALTH.

"With our objectives as unselfish as those of the profession of which we are an integral part, with an idealism as noble in thought as it is practicable in its application, our progress will be determined by our individual efforts. In our labors as an auxiliary to the American Medical Association we strive to uphold the dignity and honor of traditional medicine and to render a public service, the significance of which will be appreciated by all those blessed with a recognition of the fact that life and health come first as natural prerequisites of the happiness of mankind.

"The American Medical Association has always stood for, and I am confident will always stand for, a system of medical practice which will best serve Americans. It is our duty as the Auxiliary to this great Association to aid in a valiant manner the upholding of its wholesome principles and to resist, with all our strength, the influence of selfish and uninformed groups who seek to mold public opinion. Though we are in our youth, as an organization, and find ourselves in a world of turmoil in which unprecedented trends rock the very foundations of established institutions, let us not become bewildered. Let us remember that medical science has weathered the storms of countless political and social upheavals. It has outlived kings and emperors, dictators, monarchies, democracies, and totalitarian states. It has survived prejudice, superstition and persecution. Like life itself, which is its chief preoccupation, it is indestructible. Today, medicine is under the close scrutiny of the economists. There is no criticism of its benevolence and glory. The issue is purely an economic one.

"I know of no greater service which this body can render than to release the truth about medicine and medical practice, and it is logical to assume, that, in order to inform others, we ourselves must possess the information which we attempt to disseminate. To me, this is our first essential to an effective program. It is only through factual knowledge gained by the public that the calamity of bureaucratic control may be averted.

"The need for active participation of our members in civic organizations is a phase of our program which has been emphasized throughout the years of our existence. In the light of recent medical society activities the functions of our members in organizational work needs enhancement. I refer particularly to the invigorated interest in matters of public health shown by practically every state and county medical society in the country: maternal and child health work, tuberculosis, venereal disease, pneumonia, and cancer control programs being representative of the more important. Postgraduate and refresher courses in many areas now include meetings. The auxiliary of every district where such meetings are held may well assume the function of encouraging attendance at these gatherings.

"Strange though it may be, there are still many doctors and doctors' wives who ask: 'What is the purpose of the auxiliary?' The answer to this perennial question lies not in membership campaigns but in increased activity. It is my belief that significant increases in our membershp will result from increased activity and greater usefulness of our organization.

"In all our activities let us bear in mind that we are an auxiliary organization, subordinate to the present organization and must consult our Advisory Councils in all matters of policy and procedure."

—Mrs. Charles G. Tomlinson.

PREPARING FOR PUBLIC RELATIONS ACTIVITIES—1938-1939

Mrs. Henry Raile, Chairman

Public Relations Committee, A.M.A. Auxiliary

The blazing spotlight so rudely turned upon the medical profession has left us all blinking. The question of just what one should do under such circumstances confronts us with alarming and disarming suddenness. We cannot run away from it, we cannot shout disapproval, we are powerless to shift its focus. Only one alternative remains: we must endure scrutiny unflinchingly, accept it with poise in manner befitting the dignified ladies and gentlemen we aim to be.

Our every word and act has recently taken on new significance. Each auxiliary member, with or without individual consent, has become an active unit in public relations, and of necessity must deport herself in all public contacts in a manner complimentary to the organization. Consequently before we can outline public relations, or *courtesy contacts* with others, we must turn eyes upon ourselves to see that we are fit emissaries for the profession.

County auxiliaries during this precarious year should direct much effort toward the improvement and the beneficial relationships of their own members in order that they may function to better advantage in all they may undertake in the field of public relations.

CENTRAL MEDICAL AUXILIARY

The Auxiliary to the Central Medical Society met November 1st, in the home of Mrs. Harvey F. Garrison, Sr., with Mrs. Harvey F. Garrison, Jr., Mrs. George Owen, Mrs. F. O. Hollowell, Mrs. F. E. Rehfeldt, Mrs. W. R. Bethea and Mrs. Walton Lipscomb, co-hostesses.

The report from the Executive Board meeting was received with approval, and a plan outlined by Mrs. Boswell for bringing the Preventorium Fund to a maximum amount this year was enthusiastically approved.

Forty members were served refreshments from the tea table which was centered with a bowel of beautiful white chrysanthemums and white tapers in silver holders.

ISSAQUENA-SHARKEY-WARREN

From Vicksburg comes a very interesting looking year book which includes activities in all the projects undertaken by the State Auxiliary in the policy adopted for this year.

"THE CITADEL"*

A Discussion of Mrs. Manson, the Doctor's Wife

By W. A. Evans, M.D.

I promised to discuss the wife in The Citadel, meaning Mrs. Manson, wife of the physician whose work constitutes the theme of the book. The name of the book is The Citadel. It was written by Dr. Cronin of England and published in the United States by Farrar and Reinhart in 1936. It has been among the best sellers of works of fiction for more than a year in the United States and it sells proportionately as well in Great Britain, Ireland, Australia, New Zealand and even Europe, Asia, and Africa. The period covered is from 1924 until 1930; the field, the practice of medicine in England and Wales.

The object of the book, besides making money for, and promotion of the literary reputation of Dr. Cronin, was to expose the shortcomings of various types of medicine. The book causes one to think that Dr. Cronin had not been happy in the practice of medicine and he takes advantage of fiction-writing to air views that are, more or less, the results of his experiences. The types of practice that he writes of are state medicine, of the kind that goes by the name industrial medicine as it is carried on in a coal-mining district in Wales, where the company hires a certain number of physicians to care for their medical needs, deducting the expenses from the pay envelope of the employees; industrial medicine as it is practiced at Aberalaw, where the miners have a co-operative society which society employs the physicians who give service to their members; governmental laboratory work under the miners Fatigue Board where Manson was to do research, principally on the cause and prevention of silicosis; practicing in London as a private physician, where he succeeded in building up a considerable consultation practice and where he had many experiences with specialists. The book closes as Manson decides to form a group clinic on the same lines as the Mayo clinic and as he launches such an organization. The physician whom he creates for the purpose of stating his (Cronin's) views, and may be experiences, was named Dr. Manson. Dr. Manson was an exceptionally able man with good education and equipment, of an inquiring turn of mind and a research spirit. He was strong, physically, mentally, and spiritually. He had enough ambition to drive him on to acquire new degrees—and in England, this is most important—to gain new honors and to take on new qualifications. He was ambitious to succeed in the world, to acquire money, position, standing, and honors.

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*Read before the Woman's Auxiliary, Northeast Mississippi Medical Society, Amory, Sept. 20, 1938.

But his social and emotional equipment was poor. He was orphaned early and he had to experiences in his hard childhood and youth, he had neither time nor money to develop social contacts, or to acquire social training. He graduated with a heavy burden of debt.

Of far more importance, the result of his experiences in his hard childhood and youth those of an underprivileged person, was that he had an inferiority complex, he was envious and jealous, had a fixed idea that he was the victim of social injustice; was neurotic and emotional in spite of his patent phlegmatic manner. To make matters worse he was an "over conscientious physician" in the earlier years of the period covered. A Boston psychiatrist, Dr. Meyering, has written of "The Over Conscientious Housewife" and "The Over Conscientious High School Student" and the disturbances of behaviour and of mind and emotions that result. Cronin makes this triad by adding "The Over Conscientious Physician."

I have no intention of discussing the literary merits of THE CITADEL, its rhetoric, grammatic construction, or use of words, nor of discussing its merit as fiction. It seems desirable to state again that Dr. Cronin considered that he had a story to tell and that he created Dr. Manson as the medium through which to tell it. He created Miss Barlow, later Mrs. Manson, as a necessity for the proper portrayal of Dr. Manson. In order properly to discuss Mrs. Manson it was necessary to spend a little time telling about Dr. Manson and some of the problems he had to meet.

With this we proceed to our discussion of Mrs. Manson. Mrs. Manson, born Barlow, was likewise orphaned early. She had very few social contacts and but little social training. As soon as she got a fair education she went to work as a school teacher in order to make a living. She soon shifted her job from that of school teacher to that of wife to a neurotic man well equipped for life by academic training but otherwise with little equipment. Her job was a hard one and Cronin doomed her to failure in order that he might gain a quality his novel needed. He was drawing Dr. Manson and in order to make his point with Manson it was necessary for Cronin to sacrifice Mrs. Manson. He made Manson commit involuntary, oblique, and moral homicide.

However, we are here to discuss why wives of the Mrs. Manson type, confronted with the Mrs. Manson problem, fail and are sacrificed and what they could do to save themselves as well as the situation. We might well study how she succeeded and failed in handling her problems, for whatever value such study might have in the solution of the problems that are personal to listeners here.

Mrs. Manson stopped teaching school when she married. If before marriage she had planned an independent career upon marriage she abandoned such plans and devoted herself solely to the career of Dr. Manson. She had no outside interests, no club activities, no special church interests, no card clubs, no social life—nothing. An accident soon determined that she was not to bear children and in consequence child training and planning for children was not to be a part of her life work. All of her brains and her other capacities and qualities were to go into the job of making "Manson and Manson unlimited" a successful business in its several aspects. How well did she succeed? How much did she fail? Why did she succeed when she did? And what was the cause of her failures?

On page 50 Dr. Manson first meets the school teacher, Miss Barlow, when he tries to have a measles contact excluded from her school. In this, which was something of a controversy, the merits of the case were about equal between the two but Miss Barlow won because she handled herself and her cause better than Dr. Manson handled himself and his cause. Certain statements about her which appeared in the first part of the book will be agreed to by those who read this episode. "Christine was a very practical little person, perfectly direct and entirely without coquettry. She never flattered him" and "she was a better soldier than he. She had a quality of balance which steadied them through every crisis." In this part of the story Mrs. Manson scored a one hundred per cent success. The woman of whom these statements were made was presently to change—or more accurately the qualities for which she was praised were presently to be thrown into shadow by other qualities.

Miss Barlow married Dr. Manson as the Doctor entered his second job. His first job had been rather unsatisfactory because of the bad qualities of certain people, chief of whom was a Mrs. Page, wife of Dr. Page, and a dishonest as well as otherwise bad woman. At the time Dr. Manson still owed considerable on the cost of his education. He was well equipped with brains, ambition principles, energy and endurance but with nothing else. He had no money, no social training, no social graces and no worthwhile acquaintances. To meet the need of money Mrs. Manson lent a hand. She spent but little in house furnishings and she did the cooking and other house work. Later on she ran the dispensary and filled the prescriptions which he gave as a part of the office practice. She spent very little on clothing. From the financial standpoint she made her contribution to the welfare of the firm. Here was success number two. Her score was 100 on each of two counts. Presently Dr. Cronin developed other qualities in Mrs. Manson.

She too had led a life of lonely childhood and had been without social training. She had developed an inferiority complex; was without self confidence, was envious and jealous and had no small talk. She was not equipped to promote her husband's practice by mixing with and winning people. She could not use church or social connections to advertise him or promote his interest. Here was her failure number one. She helped her husband by doing some of his laboratory work and looking after his research animals but she did not study psychology nor medicine, nor even medical economics. She did not study Dr. Manson. Her husband was very much of a misfit, as most ambitious successful men are. So much was he a misfit that he was thrown back on himself and on the practice of medicine and in this field she was not companionate. In this field, let us say, she scored failure 50 per cent—success 50 per cent, and that grading is more than fair to her. Presently we begin to read of other more difficult qualities.

"We get on each other's nerves." His friend, a fairly successful physician, gave them a small party. Mrs. Manson was envious and jealous and she showed it at this party. Things became worse. They quarreled violently. Manson called his wife "a blasted neurotic woman." "Go! Damn it all!" he fired at her. Manson in private practice lost all his over conscientiousness. He became greedy for money. He became somewhat unscrupulous and unethical. She saw it all, saw the old Manson crumble—understood it all. Once she said, "This is not the man I married."

She stood by powerless and may not have tried to correct it all. We read, "She no longer influenced or guided him. It was he who drove ahead." It was greed and some ambition which was driving him ahead to a tragedy. He was about to lose his soul. The impression the reader gets of these episodes is that Mrs. Manson merely abrogated her position and did no great, intelligent, thinking, employed no strategy, to save the career of "Manson & Manson."

Manson developed a mild flirtation with a Mrs. Lawrence. "Some one else advised him how to dress" and when he acted in her advice his practice grew in volume and improved in quality. It was Mrs. Lawrence and not Mrs. Manson who supplied the social qualities which Manson needed.

The flirtation with Mrs. Lawrence was a mild one. He took her out a few times and he kissed her. He accepted her advice and her help but that is about as far wrong as he went. His wife knew of this flirtation and her reaction to the needs of the situation is the weakest point in her history as disclosed by the narrative.

Naturally neurotic, the quality was exaggerated. She did not become hysterical. Her fault was that she did nothing and she did not particularly try to do anything. When they were making up she told him, "I don't want you to run after me but I don't want you to run after anyone else." This negativeness is something that was not to be expected after reading of the episode between Miss Barlow and Dr. Manson at the school house.

What Mrs. Manson should have done to save her husband from becoming unethical and dishonest and to save him from Mrs. Lawrence. I do not presume to say that maybe there was nothing she could have done. But all readers of THE CITADEL would have thought better of Mrs. Manson had she tried. This she did not do. She just seemed to curl up and quit. She knew the situation, she made a correct diagnosis but she neither planned a treatment nor tried to carry one out. In this field Mrs. Manson scores zero. Had she done either we would have admired her more. Had she done both successfully our admiration for her might have over-shadowed Dr. Manson.

Dr. Cronin was doing the creating and Manson was his principal creation. He probably saw the danger to Manson from making Mrs. Manson over-admirable. Therefore, he had Dr. and Mrs. Manson make up and then killed Mrs. Manson in an automobile accident. He had remorse in bringing Manson back to his senses. He had him abandon unethical practices. He made him stop practicing individual medicine, and form a group for a group practice.

At this point in this theme he brings THE CITADEL to a close.

THE PREVENTORIUM TRUST FUND

The Preventorium is maintained by an appropriation from the Mississippi State Legislature. This fund provides amply for building, furnishings, food and clothing, but as in every other home for children there is need for many other things to give them that full training, physical, mental and spiritual, that is the aim of the Preventorium. They need encyclopedias, story books, song books, picture books, toys, playground equipment, both new and repaired, pets and their upkeep, also material for holiday celebrations that loom large on the child's horizon.

To provide these extra things so needed by the children, the Woman's Auxiliary has decided, with the advice of the council, to build up a Trust Fund of $5000, the proceeds from which would permanently take care of these needs of the Preventorium. Anyone who visits the Preventorium will be happy to see what has already been accomplished by this fund.

We wish to urge the Auxiliaries of the state, using the means best suited to your localities, to concentrate on raising this fund during this year. Some communities give benefit parties, some give chain luncheons, some assess their membership, and many individuals are contacting men of wealth in their communities to interest them in making substantial donations.

We feel that the Preventorium is the longest step in many years that Mississippi has taken for the health in many years that Mississippi has taken for the health of her people. Will you please start at once? Let's be able to say at our annual convention next spring in Gulfport. "We have reached our goal—we have completed our $5000 Trust Fund for the Preventorium."

Mrs. Henry Boswell, State Preventorium Fund Chairman.

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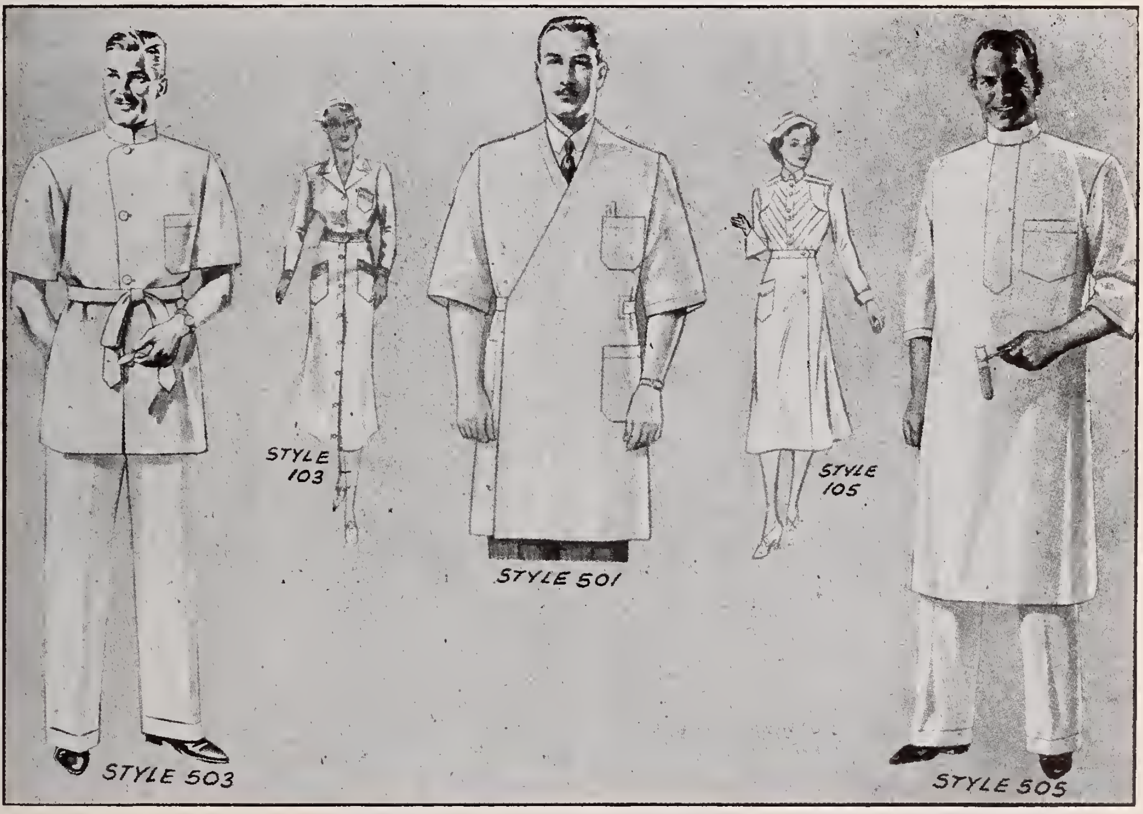

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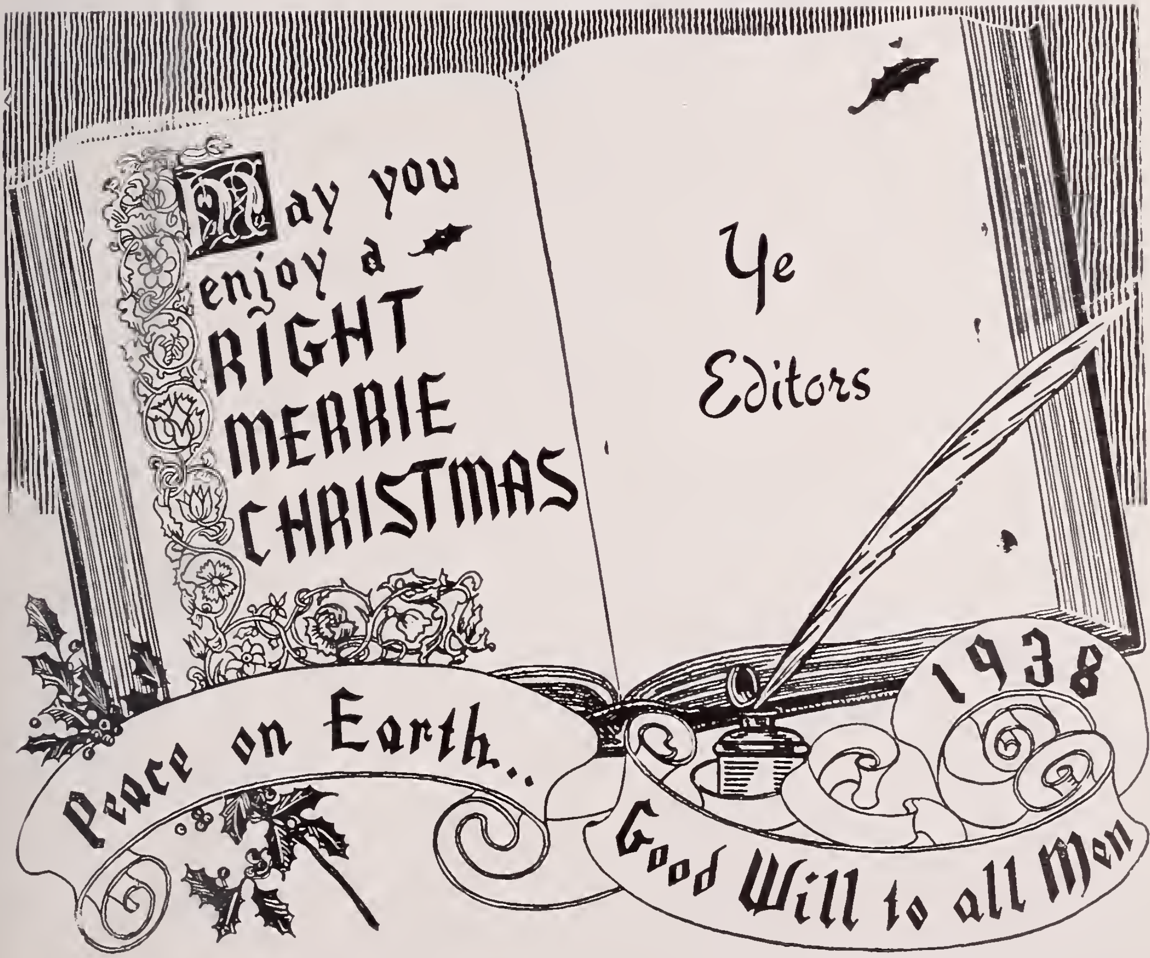
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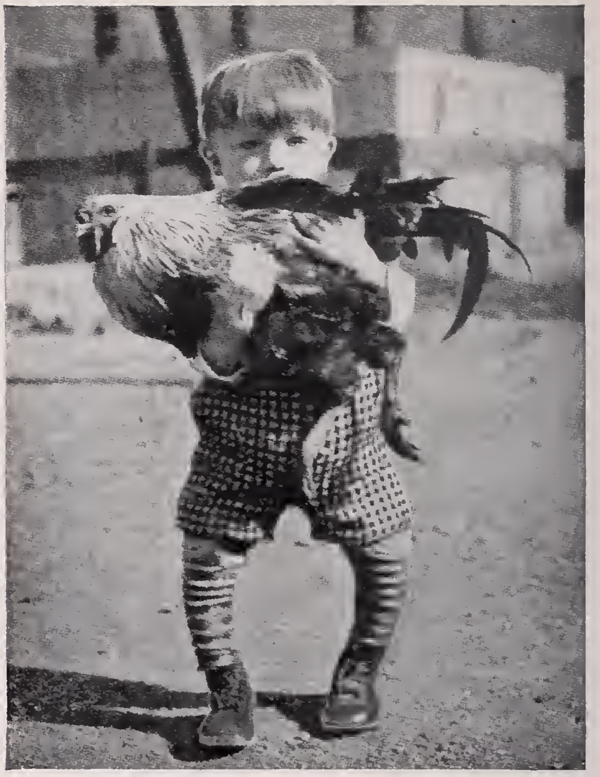

Example of severe rickets in a sunny clime. Courtesy of E. H. Christopherson, M.D., San Diego, and of "California and Western Medicine."

LEST WE FORGET—we who are of the vitamin D era—severe rickets is not yet eradicated, and moderate and mild rickets are still prevalent. Here is a white child, supposedly well fed, if judged by weight alone, a farm child apparently living out of doors a good deal. This boy was reared in a state having a latitude between 37° and 42°, where the average amount of fall and winter sunshine is *equal to that in the major portion of the United States.* And yet such stigmata of rickets as *genu varum* and the quadratic head are plain evidence that rickets does occur under these conditions.

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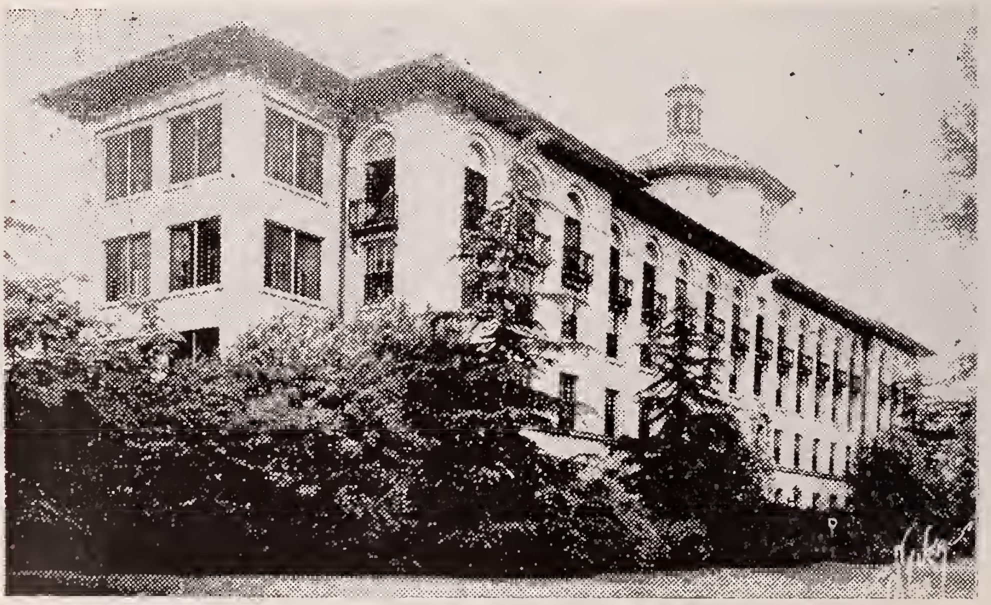

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An Evaluation of a Number of Procedures Recommended for the Prevention of Poliomyelitis*

S. D. KRAMER, M.D.
BROOKLYN, N. Y.

I HAVE BEEN asked to evaluate a number of procedures recommended for the prevention of poliomyelitis. I should like to prefix my remarks with a brief summary of the outstanding contributions in the history of this disease, upon which many of our concepts are based.

Poliomyelitis is not a new disease, it was apparently known in Biblical times; as suggested by a stele in Copenhagen of the 18th dynasty (1580-1350 B.C.). It depicts a portrait of an Egyptian prince presenting a deformity which could only have resulted from an attack of poliomyelitis. More recently a study of the bones from a disinterred cemetery in Greenland, dating back to the 15th century, established the presence of this disease, although in our own memory and in medical historical writings, the disease had apparently been unknown.

It is interesting and not altogether unexpected that our first description of the disease came from an orthopedic surgeon. Heine, a member of a family of physiotherapists and orthopedic surgeons, gave us in 1840 our first most complete description of the clinical as well as the orthopedic phases of this disease. Fifty years late (1890), Medin, a clinician, rediscovered and described the clinical phases of the disease and to some extent its pathology.

In our own country the first description of an outbreak was by a health officer in Vermont, Dr. Caverly[1], whose notes upon a disease quite unknown to him at that time gave us a most faithful description of the epidemiological and clinical features of poliomyelitis.

In 1905 Wickman[2], in a larger, more comprehensive study, reported an outbreak of this disease on the Scandinavian peninsula. In this report we found a description of the clinical disease and an attempt at classification. This author also gave a good description of the pathology and localized the essential and distinctive lesions in the ganglia of the anterior horns of the cord. Both Caverly and Wickman described non-paralytic and abortive forms of the disease and suggested its contagious nature.

As has been true of many diseases, small progress was made to a better understanding of poliomyelitis until it was reproduced in the experimental animal. This was first accomplished by Landsteiner and Popper[3] in 1909, and almost simultaneously by Flexner and Lewis[4] in this country. Landsteiner and Popper first produced the disease in monkeys by the inoculation of heavy suspensions of human material intraperitoneally into monkeys. Flexner and Lewis produced the disease by means of intracerebral inoculations of cord suspension and gave us a technique for carrying our infective agent indefinitely through monkey passage. With these outstanding contributions began what might be termed the experimental period in the disease.

Shortly after his preliminary observations Flexner reported the presence in the blood serum of human beings and of animals who had passed through an attack of the disease, of an immune substance referred to as neutralizing substance, (because of the power of such convalescent serum to neutralize or render non-infective otherwise potent virus).

With the help of these experimental findings, we have been able to carry on certain epidemiologic studies and to submit a number of our concepts to experimental procedures and proof.

A number of factors have, however, strongly militated against the rapid accumulation of experimental evidence, and as a result many of our present concepts of the disease are still based on extraordinarily little data.

In the first place, poliomyelitis is a relatively rare disease, and except in communities where it is more or less endemic it is the privilege of few physicians to observe a sufficient number of instances of the disease to give them any great familiarity with it. In the second place, up to the present time, we have been completely unsuccessful in obtaining an animal other than the monkey to take the disease. The difficulties in obtaining and the expense of the experimental animal have been large factors in limiting the scope of investigations. Furthermore, even though poliomyelitis has been established in the monkey, this is not so easily accomplished. For every successful infection obtained in the experimental animal from human material there are many failures, and the mere fact that an animal has failed to succumb to the experimental disease does not even now mean that the virus was not present. In other words, the identification of the presence of the etiological agent is not so simple a matter as it is in diphtheria, scarlet fever, or erysipelas. However, in spite of the difficulties involved in obtaining a "take" in the experimental animal and the great and almost prohibitive expense involved in the experimental studies, we have made definite strides and accumulated a certain amount of experimental evidence to act at least as a basis for some of our present concepts of the disease, and in the following pages I shall attempt to outline briefly some of these concepts.

---

*Read before the Mid-South Post-Graduate Medical Assembly, Memphis, Tenn., February, 1938.

Concerning the etiologic agent - - - In answer to the commonly repeated question—"Have you isolated the germ of the disease?"—the answer is, "Yes." The virus of poliomyelitis has been as definitely isolated as any such infective agent has been isolated in any disease caused by a virus. We are as certain that we are working with this infective agent as we are with a bacterial agent, except that we cannot see it. We can produce the experimental disease and prove its presence in the experimental animal by pathological studies and by indefinite passage through monkeys. We can immunize normal animals with it and establish the presence of such immunity both by testing the serum for the presence of neutralizing substance and by the resistance of such animals to the intracerebral infection. We can destroy the virus by heat and chemicals and we can modify its infectivity by adsorption on certain inert substances like kaolin and aluminum gel, or by neutralizing it in part or completely by the addition of varying amounts of convalescent or other immune serum.

The virus is recovered with the greatest regularity from the spinal cord of human beings and monkeys, during the height of the disease. It has also been recovered from the nasal mucosa and secretions of animals sick with the disease.

Recently Paul and Trask[5] and Kramer, Sobel, Grossman and Hoskwith[6], have similarly recovered the virus from the nasal passages of human beings suffering from the disease. This has been accomplished sufficiently often to indicate that the nose and throat harbor the virus and is a means of egress of the virus from the body. These results in the human being, added to the experimental data, have added strength and give assurance to our concept of the contagious nature of the disease which had previously been based on epidemiologic evidence alone.

It is interesting to note and serves to illustrate the paucity of the experimental data that until the recent publication by Trask and Kramer and their associates, the three weeks' quarantine period for cases of poliomyelitis was based on only about two previous observations of about 20 or more years ago: one by Dubois, Neal and Zingher[7], who recovered the virus about 18 days after the onset of the disease, and by Lucas and Osgood[8], who recovered it about 6 months after the acute attack.

The recent results of experiments by Paul and Trask and in our own laboratories on the survival of the virus in the nose and throat of patients ill with the disease, indicates that the virus may persist from one to three weeks. These figures coincide with the commonly accepted quarantine period generally in force throughout the world.

Flexner's early observations of the development of neutralizing substance in the blood serum of animals who had passed through an attack of the disease has given rise to a more or less practical, and in a broad sense a reliable, test for immunity to poliomyelitis. By the use of this socalled neutralization test, Aycock and Kramer[9] have studied the distribution of immunity to the disease in the normal population in the different age groups. Their studies included individuals living in rural as well as urban communities. They found that nine-tenths of urban adults were immune to the disease, and that the largest number of non-immunes occurred in children under five years of age. These figures coincide very closely to the age distribution of the disease. They also found that people living in rural communities were less likely to be immune, and that a rural adult was no more likely to be immune than a child of ten residing in the city. They found as extensive an immunity in urban adults living in the South as those living in the North[10]. As in diphtheria and other contagious diseases of childhood, they found that newborns were passively protected by maternal immunity for part of the first year of life[11].

The question arose concerning the source of this immunity. Was there some physiological bodily change or "maturation," as suggested by Jungeblut[12], or is this widespread immunity in the normal population the result of exposure to the virus of the disease? A similar question had previously arisen in the case of diphtheria, which was answered by Goldberger[13] and others who found a sufficient number of healthy carriers of the diphtheria bacillus in the normal population to account for its widespread dissemination in the growing population. Since the virus of poliomyelitis can neither be seen nor grown on artificial media, such surveys were not possible in the case of poliomyelitis.

Furthermore, poliomyelitis is a relatively rare disease offering too few opportunities for direct contact with patients to account for the widespread distribution of immunity in the normal population. The virus has, however, been recovered from the nasal passages of acute cases and from contacts, although this is a difficult and expensive procedure. In our laboratory in 1935[14], we were successful in recovering the virus from the tonsils and adenoids of a healthy child who had no history of contact with the disease and in a year when Brooklyn was relatively free from poliomyelitis. It was one of about 140 tonsils and adenoids examined. This suggests a possible carrier rate between one-half and one per cent; a figure which if substantiated would be sufficient to saturate the population over a period of 20 years. This and the other recoveries of the virus from contacts, has led a number of us to assume the presence of the existence of true carriers of the virus of poliomyelitis in the normal population. This assumption although meagerly supported by direct evidence, serves to explain the widespread distribution of immunity in the normal population; an explanation that coincides with that accepted for the similarly widespread distribution of immunity to diphtheria.

In what ways has our accumulated information concerning the disease contributed towards its control by way of treatment or prevention? Netter[15] in 1911 in France was the first to employ convalescent serum in the treatment of the disease in the acute stages. He did this from analogy with other diseases rather than from exact information; but the reasonableness of this procedure was substantiated by the subsequently evolved information that the blood serums of convalescents possessed the power to neutralize the virus. In 1927, '28, '29, Aycock, Luther and Kramer[16], treated large numbers of patients in the preparalytic stage of the disease, and compared the results with similar numbers of patients who had not received serum. The results of their findings were so strikingly in favor of the serum treated cases, both from the number of patients paralyzed and the extent of paralysis, as well as from the case fatality rate, that the procedure was adopted. It was not until 1931 when Kramer, Aycock, Solomon, and Thenaby[17] modified the experimental conditions by treating alternate cases, and from a larger study carried on by the Academy of Medicine, under similar, though because of the size of the experiment, not as well-controlled experimental conditions, that it became evident that the serum was actually of little or no value in the outcome of a case. About half the patients in our group recovered without any paralysis, irrespective of whether or not they received the serum; and the serum treated cases fared no better than those that failed to receive serum. Dr. William H. Park[18] and the Members of the Committee of the Academy of Medicine, arrived at the same conclusion of the apparent uselessness of convalescent serum in the treatment of the acute illness.

Our results are illustrated in the accompanying three charts.

CHART I

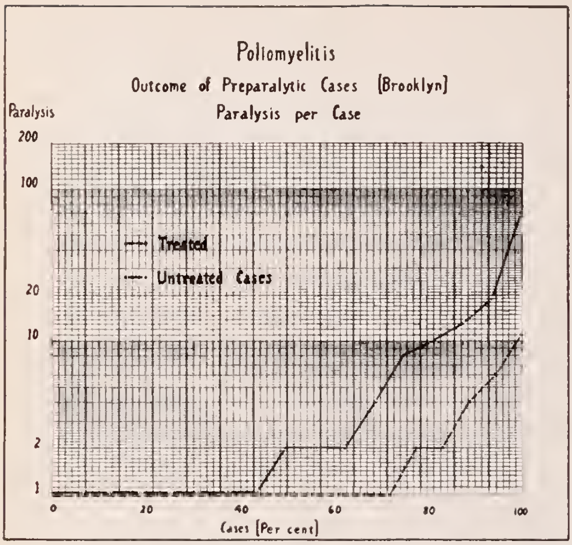


CHART II

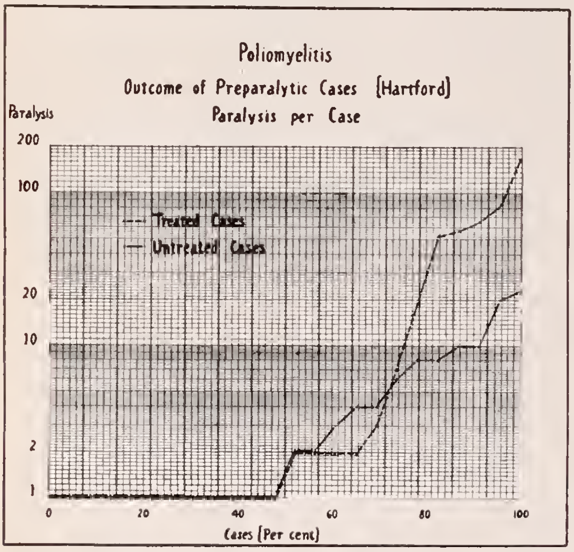
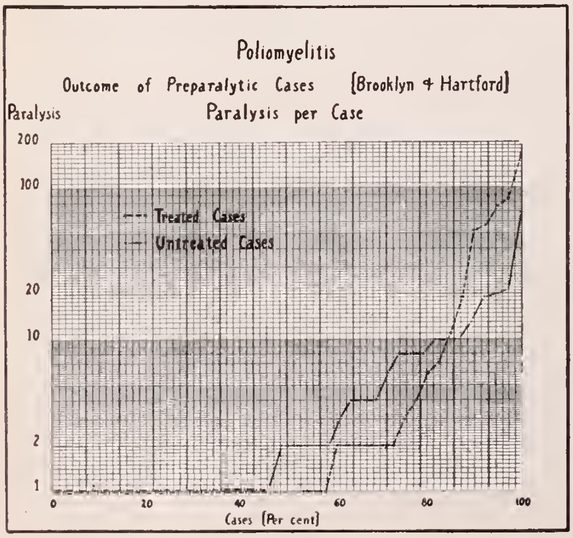


CHART III



There are, on the other hand, those who still feel that convalescent serum is of value in this connection, notably, McNamara in Australia, some Canadian workers, and serum was used in the Chicago outbreak of poliomyelitis last year. The weight of the evidence however indicated that such serum, at least in the doses employed, is of little or no value.

It has long been suggested that H. C. S. may have prophylactic value similar to the prophylactic use of diphtheria anti-toxin. Our own experiences with immune serum, both human and monkey, as a prophylactic agent in the experimental disease, have been anything but reassuring. The time is too limited to give the details of all of our own experimental efforts in that direction. The following statements, however, briefly summarize the results of our many experiments with immune serum:

We have failed to protect our animals against intracerebral inoculation of virus for even 24 hours after the administration of potent immune serum subcutaneously, intramuscularly or intravenously in huge doses. Furthermore, the infectivity of the cords of animals receiving large quantities of serum (10 to 30 c.c. per kilo body weight) during the incubation period of the disease, seemed unaffected.

We failed to detect the presence of neutralizing substance in the blood of monkeys after the administration of large doses of H.C.S., even 12 hours after its administration. When homologous M.C.S. was employed we could occasionally detect the presence of neutralizing substance up to but not later than 12 hours after the serum was administered; and these findings occurred only when huge doses of serum were employed (75 to 100 c.c. of serum was administered to a 6 to 8 pound monkey).

In spite of the many negative experimental results and only the uncertain clinical impressions, the general feeling and urge has been to employ such serum for human prophylaxis, and there have appeared in the literature the results of a number of such efforts to confer protection by the administration of parental blood or H. C. S. in epidemic areas. The analysis of the results of two such attempts may serve to emphasize the caution which must be exercised in evaluating such data.

It might be well at this point to consider some of the epidemiological and clinical features of the disease, so that we may have some notion of the conditions under which reliable information may be obtained. In the first place, poliomyelitis is a disease of low incidence, suggesting that many thousands of children must be inoculated and compared with an equal number of uninoculated children of the same age group, before the value of any prophylactic agent can be determined. In the second place, the outcome of contact with the virus is not predictable, that is, we have no way of telling at the outset whether or not an exposed child will escape the disease, nor in the event that the child contracts the disease, can we predict the degree of crippling. In the third place, although poliomyelitis is endemic in certain areas, the epidemic occurrence is unpredictable for any given area or district, so that we are seldom prepared to take advantage of a situation at the onset of an outbreak. Furthermore, the duration of an epidemic of poliomyelitis is seldom longer than two and a half to three months.

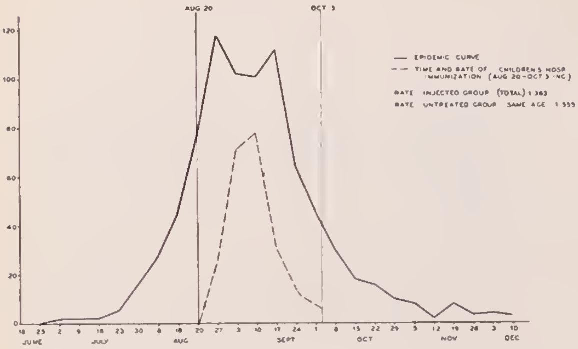
We are usually well past the first quarter or third of the outbreak before we realize that we are dealing with anything more than a sporadic occurrence of the disease in an endemic area. Unless by happy chance an adequate organization supplied with large quantities of previously prepared serum be present in the immediate location of the outbreak to carry on such an experiment in prophylaxis, from two to four weeks may be lost before the mechanics of the preparation for the experiment are under way. Since a certain interval of time is further necessary for the actual administration of the serum, at least one-half or more of the epidemic is over and the information resulting from such a study can only apply to the smaller and waning portion of the outbreak.

The largest of such recorded attempts at prophylaxis was carried out by Stokes[19] and his co-workers in Philadelphia in the summer of 1932. Because of the close proximity of Philadelphia to New York, which had passed through an outbreak of the disease the previous year, the authorities of Philadelphia were on the alert and had collected and processed a large volume of C. S. The rapid and efficient organization of the unit and the splendid cooperation of the many health and other agencies, is a commendable example of a community health venture.

The first case of the disease was reported in July, but it was not until the middle of August that Philadelphia realized that it was in the midst of an outbreak second only to the severe outbreak of 1916. The peak of the outbreak was reached the fourth week in August. The largest active unit which was situated at the Children's Hospital in Philadelphia, began to function August 20th and continued to function for almost six weeks, or until the epidemic was essentially over. During this six-week interval, 1,341 children were injected at the Children's Hospital with 60 c.c. each of whole adult blood. Other hospitals in Philadelphia co-operated in the effort; these latter institutions employing about 20 c.c. of C. S. and 20 to 40 c.c. of adult serum or whole blood, making the total number of children injected 2,179. Six mild cases of the disease occurred among the 1,341 injected at the Children's Hospital; none was reported from the other hospitals. The incidence of this entire group of 2,179 children was therefore 1:363, the incidence for the rest of the city in children under 11 years of age was 1:555.

This data is illustrated in the accompanying chart. As can be seen, by the time the serum clinic had gained impetus, the peak of the epidemic had been passed and by the time the administration of serum had been completed, the epidemic was essentially over. It must, furthermore, be recognized that unconscious and unavoidable selection was constantly going on throughout the period of serum administration, since the children contracting the disease during this sex-week period were automatically placed in the control group. In spite of the selection, furthermore, it appears that the incidence of the disease in the control group was appreciably lower than that in the treated group. Although this can readily be explained by closer observation and probable detection of milder cases in the treated group, yet these figures cannot be interpreted as favoring the use of prophylactic serum. Stokes, Irving and Wohlman emphasize the mildness of the disease in the treated cases, and conclude that the prophylactic use of serum was justified. The smallness of the figures associated with the unpredictableness of the disease would lead one to question the validity of such a conclusion.

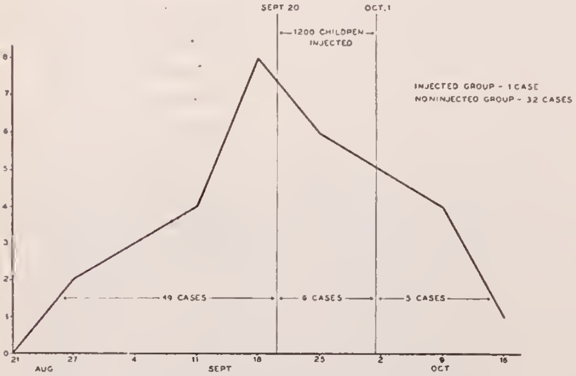
CHART IV



Another similar study on prophylactic value of adult serum took place in the town of Bradford, Pennsylvania. At the suggestion of Dr. Brebner[20] of Dr. Park's laboratory, the local health authorities in Bradford established a free clinic in which 10 to 20 c.c. of parental blood was administered to children intramuscularly.

The first case of poliomyelitis was reported on August 25 and the last case on October 17. (See Chart V). The free clinic commenced operating on Sept. 20, and functioned until Oct. 1. Twelve hundred children were inoculated at the free clinic and about 100 more by private physicians. About 2,500 children of the same age group did not receive serum and constituted the control group. One mild case occurred in the immunized group, while 32 cases occurred in the controls.

CHART V



At first glance these figures seem impressive; however, a detailed analysis of the outbreak reveals these pertinent points. First, 19 cases or almost 60% of the total number reported during the outbreak had already been reported before September 20th when the free clinic commenced operating. Second, during the ten-day period that the serum was administered an additional nine cases were reported. These nine cases accounting for an added 27% of the total number of cases reported were naturally delegated to the control group. It is fairly evident therefore, that the best possible interpretation of the results of this experiment could only apply to less than half of the outbreak; the part of an outbreak that is generally recognized as being the milder or waning part. If, in addition, correction is made for the unconscious selection in the added 27% of the cases that occurred while the immunization was going on, the excellent results as indicated by the ratio of one case in the treated group versus 32 cases in the untreated group become more apparent than real.

In summarizing these two experimental attempts at human prophylaxis, it must be recognized that although these workers may have had a strong clinical impression that the administration of blood had aprophylactic value, an analysis of the details of these experiments reveals the fact that there is too little actual information available to justify any conclusion.

With this failure to establish convalescent serum as an agent to combat the disease, investigators turned their efforts in other directions in their continued attempts to control the disease. In 1933, 34, and 35, three methods appeared in the literature and were recommended by the authors as possibe and perhaps practical methods for the control of the disease through active immunization.

Although any procedure involving active immunization as a general public health procedure would appear to be extravagant and wasteful in view of the relative rareness of the disease, yet in face of the extraordinary panic attending even the smallest outbreak of poliomyelitis, such suggestions of control have definite merit. However, it must be remembered that any method of active immunization must possess at least two virtues. In the first place, the vaccine must be safe, for in the face of a disease whose epidemic incidence seldom exceeds one or two per thousand population even an occasional accident in the course of vaccination is likely to exceed the normal incidence of the disease, thus vitiating the desired results. In the second place, the vaccine must be effective.

In 1933 Kramer and Schaeffer[21] published experiments on the active immunization of Rhesus monkeys with a vaccine consisting of active virus rendered non-infective by the use of convalescent serum. Their experimental results and safety of the mixture, led these authors to suggest the possibility that this vaccine might be applicable for human immunization.

In 1934 Kolmer and Rule[22] published similar claims for a vaccine made of active virus, to which sodium ricinoleate was added. These authors believed that sodium ricinoleate served to reduce the infectivity of the virus. After trial in a small number of volunteers, without accident, these authors recommended this vaccine for general human application.

A third vaccine was recommended by Brodie in 1935[23]. His vaccine consisted of active virus rendered non-infective by the addition of one-tenth per cent formalin.

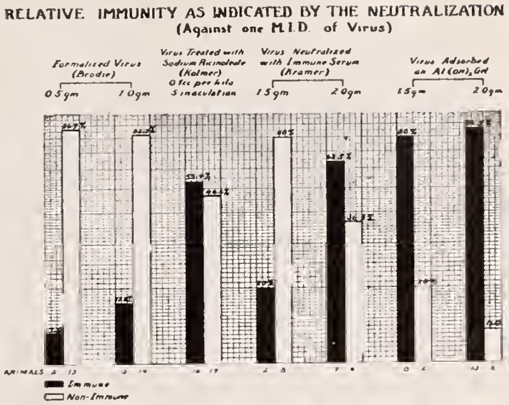
The Brodie vaccine was extensively publicized and was subjected to widespread clinical trial in different parts of the country, under more or less controlled conditions. Kolmer's vaccine received similar widespread publicity and was likewise subjected to clinical trial, with little or no supervision. You are all doubtless familiar with the outcome of these clinical trials. Both of these methods failed in their objective—both failed to fulfill the two cardinal requirements for a vaccine for poliomyelitis, namely: safety and efficacy.

The vaccine recommended by Kramer and Schaeffer remained in the experimental stage and did not receive clinical trial.

In 1935 we carried out a comparative study of these three vaccines[24 25 26], adding a fourth vaccine, which in our hands has yielded a high degree of immunity in a large proportion of animals as a control. This vaccine is prepared by adsorbing active potent virus on aluminum hydroxide gel. Results of these comparative studies on animals is summarized in the following two charts.

The immunity in vaccinated animals was determined in two ways—the first consisted of testing the serum of animals (obtained about one month after the last dose of vaccine) for the presence of neutralizing substance. The second and more rigorous test was the intracerebral test, which consists of intracerebral inoculation of an adequate dose of virus.

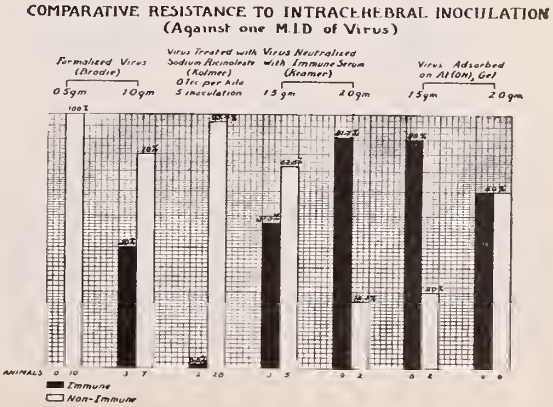
CHART VI



As can be seen from the first chart giving results of the neutralization test, only 13 to 18 per cent of animals inoculated with the equivalent of ½ gram or 1 gram of the Brodie vaccine (the dose recommended by him) developed detectable amounts of neutralizing substance; more than one-half of the animals inoculated with the Kolmer vaccine gave evidence of having developed neutralizing substance. 20 to 64 per cent (depending upon the dosage of vaccine) of animals inoculated with a neutralized mixture of virus and immune serum, and from 80 to 87 per cent of animals inoculated with virus absorbed on A1(OH)[3] had detectable amounts of neutralizing substance.

The results of the intracerebral tests are summarized in the second chart. As can be seen from this chart, the vaccine when used in the manner and dosage recommended by Brodie, namely: the equivalent of ½ gram virus, failed to protect any of the animals. When twice the dose of vaccine was used (or the equivalent of 1 gram virus), about one-third of the animals resisted intracerebral inoculation. Only about 7 per cent of the animals vaccinated with the Kolmer material resisted intracerebral inoculation.

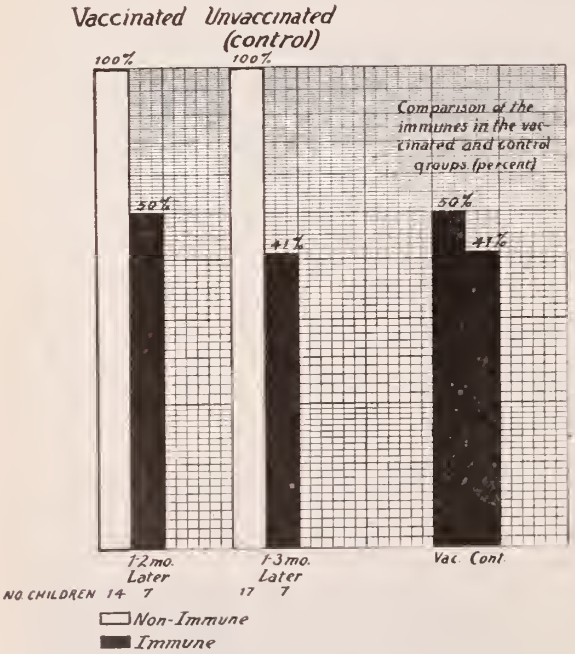
CHART VII



More favorable results were obtained when the equivalent of from 1½ to 2 grams virus of the neutralized serum-virus mixture was employed. From 37 to 82 per cent of the animals resisted intracerebral inoculation, and these results compared favorably with the vaccine prepared by adsorbing virus on Al(OH)[3]. From the results of this comparative study, Kramer and Schaeffer continue to offer neutralized mixtures of virus and serum as a safe and possibly effective means for human immunization.

In the next chart are given the results of a group of non-immune children vaccinated with Brodie material and compared with a group of non-immune children of the same age and locality who had not received the vaccine. The essentially identical results as shown by the presence of neutralizing substance in the unvaccinated and vaccinated groups from one to three months after vaccination, suggests that the development of immunity in these children was probably not associated with the administration of the vaccine. It rather suggests that this immunity was the result of the natural immunization of the population.

CHART VIII



There have appeared in the literature during the past two years a number of publications dealing with the prevention of intranasal infection in the monkey with the virus of poliomyelitis by the application of certain chemicals to the nasal mucous membrane[27].

All published procedures are based upon the generally accepted concept that the virus of poliomyelitis normally enters the body by way of the olfactory portion of the nasal mucous membrane. Although the exact mechanism involved is not clearly understood, it is believed that these chemicals serve to render the mucous membrane impervious to the passage of the virus.

Two such suggestions have received some prominence, the first by Armstrong[27a] from the laboratory of the United States Public Health Service. This worker devised a mixture consisting of a solution of ½ per cent picric acid and ½ per cent sodium alum in normal saline, which he found effective in preventing the disease in the experimental animal. Because of the relative harmlessness of these chemicals Armstrong suggested that the mixture be given clinical trial. This was done in an epidemic area in Alabama (Birmingham and Jefferson County[28]). Every attempt was made to organize the experiment so that a maximum of accurate information would be made available. Full hearted co-operation was given by the majority of local physicians, by local health authorities and by the newspapers. At medical meetings the experimental basis and the aims of this venture were explained to the doctors. The co-operation of the lay public was urged both by medical authorities and the press. It was recommended that the chemicals be applied either by a doctor or under the immediate supervision of a doctor, and the details of application were explained.

On July 15, 1936, open air clinics were established to which the lay public was invited to come for treatment or to act as controls in the event they did not choose to receive treatment. Similar attempts at organized treatment were made in Tennessee and Mississippi.

Although the great mass of physicians were completely co-operative, it soon became evident that a large bulk of the lay public had become uninvited and untrained experimenters. The results published by Armstrong, however, dealt with those groups of treated and untreated individuals in specified areas of Birmingham and Jefferson County. Between July 15 and August 22 a total of 3,545 or 69 per cent of white volunteers, and 1,465 or 48.9 per cent of colored volunteers, received chemical sprays. The total number of cases in the sprayed white group was 14. The theoretical number of cases in the sprayed white group, based upon the occurrence of cases in the control group, was 16.8 suggesting that 2 or 3 cases may have been spared infection by the intranasal application of picric acid-sodium alum. Almost identical actual and theoretical results were obtained in the colored group. I might best summarize this experiment by quoting from Armstrong's discussion. "The development of poliomyelitis among persons sprayed according to instructions, suggests that either the chemicals were not effective for man or the advised method of application which Drs. Peet and Schultz have shown effective for monkeys, was not, as practiced, trustworthy for man. It is therefore obvious that further experimental work directed toward the finding of a more dependable method of application and of a more ideal solution be continued."

Another method has more recently been suggested as a nasal barrier by Schultz and Gebhardt[27b]. This method consists of the application of ½ or 1 per cent zinc sulphate to the olfactory portion of the nasal mucous membrane. From an experimental point of view this chemical appears to establish an effective barrier to intranasl infection in most treated animals. After preliminary instillations of this solution into the nostrils of monkeys for 5 successive days most of the animals resist infection by the intranasal route for a period of one month, after which they are again susceptible.

Although this procedure has enjoyed some human trial, there have been no detailed published reports of such efforts. It is hoped that although this chemical offers only temporary protection that it will be as effective in human beings as it is in the experimental animal. The application of zinc sulphate unfortunately gives rise to a number of annoying symptoms such as severe headache and vomiting and a more or less prolonged anosmia and is sharply resisted by children. Should it, in spite of these drawbacks, prove effective in preventing infection in the human being, it will be a valuable contribution to control, at least, in times of an outbreak.

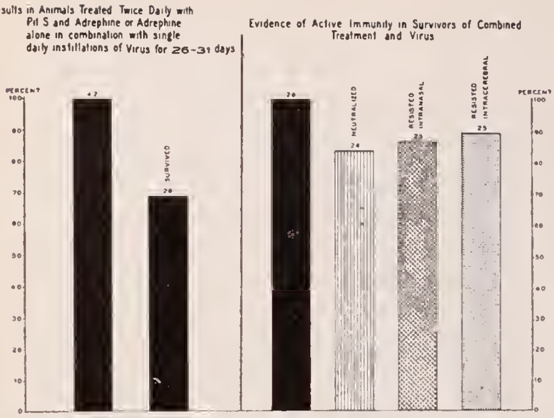
It must, of course, be recognized that the establishment of a chemical blockade to the entrance of the virus, is to be regarded as a measure of temporary control. Such procedures do not appear to alter the underlying susceptibility of the animals to the diseases. A somewhat loose analogy would be the usefulness of the diphtheria anti-toxin in the control of diphtheria. Furthermore, should these, or similar substances, prove effective in preventing infection in human beings, their employment year after year might result in the postponement of the age of exposure and disease, and thus tend to accumulate a large number of susceptibles in the normal population. The wisdom of accumulating such susceptibles might seriously be questioned both from an epidemiologic and an economic point of view.

It is our opinion that a more fundamental approach to the control of poliomyelitis rests in a better understanding of the nature of the underlying factors that determine susceptibility to the disease. What these factors are is not definitely known. Draper's[29] studies have suggested physiologic factors. Aycock[30] has suggested an inheritance factor.

During the past year we have apparently succeeded in altering the susceptibility of Macacus Rhesus to intranasal instillations of potent virus with the subsequent development of immunity[31]. The procedure consists of instilling a mixture of adrenalin and ephedrine in combination with surgical pituitrin into the nostrils of animals. ½ to ¾ of the treated animals have not only resisted intranasal infection with potent virus but most of them have, after prolonged treatment with these substances in combination with virus, developed an active immunity as indicated by the appearance of neutralizing substance in their blood and by their resistance to intracerebral infection.

These experimental results are summarized in the accompanying chart:

CHART IX



It appears from these experiments that we have altered the uniform susceptibility of the monkey to intranasal infection, so that these animals now react like human beings.

We have no knowledge of the mechanism by means of which pituitrin S and Adrephine produce this apparent alteration in susceptibilty, but since the outcome of continued exposure to virus in most animals treated with these substances results in immunity, we believe this offers not alone a better approach to an understanding of the disease, but also perhaps towards the control of poliomyelitis.

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The Present Status of Sulfanilimide Therapy

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INTRODUCTION

SINCE THE dawn of therapeutics, medical men have sought a substance that would treat disease systemically; a single drug that would be equally efficacious in the treatment of pathological processes throughout the entire body; thus a veritable panacea that attacks pathogenic invaders of all portions of the human body without harming the host. Thus far, this has unfortunately not been accomplished; but with the discovery and clinical application of sulfanilimide, a new ray of therapeutic hope arises for a multitude of diseases that previously have been most disconcerting to the physicians because of their alarming mortality or their serious morbidity.

Medical men have heard the cry of "wolf" so often in the form of intravenous mercurochrome, specific and non-specific antisera, etc., that a note of skepticism is likewise an accompaniment of this new drug, but it will certainly not be as disappointing as the much vaunted remedies above.

But with the unanimous reports of success with this new product, an open mind must be maintained and it is the purpose of this paper to show, not only its utility, but also its shortcomings, limitations and dangers derived from a review of most of the available literature which comprises about two hundred journal articles.

CHEMISTRY

Marshall has shown that the optimum concentration of the drug in the blood stream is 1: 10,000, and that this is easily obtained by large initial doses of the drug, and likewise easily maintained by considerably smaller doses.

Nearly 100% of the sulfanilimide may be recovered from the urine after equilibrium between intake and output is established; which takes two to three days to establish, and the same length of time to free the body of the drug after its discontinuance. The drug appears in the cerebro-spinal fluid within ten minutes after oral administration. The drug also passes into the amniotic fluid, and may be found in the fetus but is not considered harmful.

Marshall has developed a bio-chemical method of determining the sulfanilimide content of all the body fluids colorimetrically, and he discovered that since the substance is one hundred per cent eliminated in the urine, then in cases of decreased renal function, the ability to excrete the drug is diminished and continued ingestion results in an undesired and dangerous accumulation of the drug. Human subjects excrete the drug partly unchanged and partly conjugated in the form of an acetylated derivative.

Trefouel and Buttle were the first to show that para-mino-benzene sulfonamide is the active pharmacologically effective portion of the prontosils, and the simple sulfanilimide is more effective than its complicated predecessors.

Para-amino-benzene sulfonamide is a reduction product of the prontosils and is the bacteriostatic part of the group, so when prontosil was used in vitro to affect streptococcus, no results were obtained, but when strong reducing agents, as formaldehyde sulfoxylate or cysteine hydrochloride were added, the expected bacteriostatic effect was observed. The reducing agent in the body is not known for certain, but is possibly the streptococcus itself, since heavy cultures of streptococcus will reduce prontosil in vitro.

At the present time, the prontosils appear to be essentially pharmacologically negative, that is, they show no effect on the blood pressure, heart function, or pulse, and no demonstrable effect on heart muscle or smooth muscle of any type as intestine, ureters, uterus, etc.

HISTORY

Originally in 1908, the prontosils were used in Germany as a dye. The earliest therapeutic use of the prontosils dates back to 1933, when the German Foerster reported the use of prontosil flavum, strangely enough in a case of generalized staphylococcic infection previously resistant to treatment with astonishing results. However, this was considered merely a coincidence and no more work received recognition until 1935, with the important work of Domagk, and this may be called the birth of the drug as a chemo-therapeutic measure. His experimental work was carried out on mice, in which cultures of beta-hemolytic streptococcus from a human subject were introduced into the peritoneal cavities of a number of mice and the animals without treatment all died in a few days, whereas, the majority of mice that received oral sulfanilimide recovered without ill effects.

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The drug was experimented with extensively in Europe for some time before its introduction to America by Bliss and Long of Johns Hopkins University.

MODE OF ACTION

The exact mode of action of sulfanilimide is not known.

The original observations of Domagk were that the drug produced a leukocytosis that in turn resulted in increased phagocytosis, but since that time other theories have come to light that seem to discount this theory.

Colebrook and Kenny made the very important revelation that the prontosils with the exception of para-amino-benzene sulfonamide did not exert an effect in vitro upon cultures of streptococcus, likewise, when the drug is mixed with serum of rabbits or normal human subjects, still no detrimental effect is noted upon the streptococcic growth, but when the serum from an animal infected with streptococcus is used, the mixture then is bacteriostatic, and the chemical analysis of the blood reveals the presence of para-amino-benzene sulfonamide, when the complicated prontosil was originally used; so the reduction is the important factor in the activation of prontosil. In a series of experiments, Bliss and Long have shown that the most probable activity of sulfanilimide is that of bacteriostosis; that is, it is growth inhibitory in nature.

Osgood has recently stated that the drug neutralizes the bacterial toxins rather than any direct effect on the bacteria except that of bacteriostosis.

In two groups of mice injected intraperitoneally with B. Welchii organisms, the controls showed millions of bacteria within and without the white cells. In the prontosil treated group, only a few organisms were seen and these were ingested, so the conclusion was that the drug was growth inhibitory. Only a mild leucocytosis (and that of a polymorphonuclear type) occurs, and the drug apparently has no bacteriocidal activity.

DISEASES TREATED WITH SULFANILIMIDE

Many diseases are being treated with this new drug, but since its primary function is the combating of streptococcic infections, these shall be considered first.

(1.) Streptococcic Meningitis:

This disease, that until now has shown very nearly a one hundred per cent mortality rate, is being successfully cured with the prontosils. If no other uses were found for this drug the number of lives that have been saved by it, from the ravages of this disease would amply repay the researchists for their work.

In the past fifteen years at Johns Hopkins Hospital, there have been thirty-seven cases of beta-homolytic streptococcic meningitis with no recoveries; while during the past year four cases were seen and treated with sulfanilimide and three of them recovered.

Graeme Mitchell of Cincinnatti states that in the past fourteen years he has seen fifty-seven cases with one recovery, and under this new therapeutic regime he has treated six cases with four recoveries. Throughout the world, reports comparable to the above have been made.

The method used is oral administration in adult doses of sixty to eighty grains daily by mouth and intrathecal administration of 0.8% sulfanilimide solution in normal saline in ten to thirty cubic centimeters twice a day and then once a day until the spinal fluid is sterile for forty-eight hours. The exact technic of spinal medication will be discussed later.

(2.) Erysipelas:

The next streptococcic disease that has been successfully treated and cured by this drug is erysipelas. Brennemann of the Chicago Children's Memorial Hospital sums up the general consensus of opinion by saying, "In some cases of erysipelas, the result was so prompt as to be positively shocking."

Snodgrass and Anderson report a carefully controlled series of three hundred and twelve erysipelas cases with one-third of them treated with antitoxin, one-third with sulfanilimide and one-third with a combination of sulfanilimide and ultra-violet light and concluded that the sulfanilimide greatly exceeded the antitoxin in curative power. Using fifteen grains every four hours, five grams was the average dose required to product a normal temperature.

Breen and Taylor cured forty-six successive cases and all cases showed a normal temperature in forty-eight hours and no relapses occurred. Another group of forty-six cases treated with antitoxin and the usual routine, had a much longer period of fever, had numerous relapses and the average stay in the hospital was twenty-four days as compared with eighteen days in the sulfanilimide group. So we see that while the mortality due to erysipelas has never been alarming, the period of morbidity has been a matter of much concern and this is definitely a therapeutic advance.

(3.) PUERPERAL SEPSIS:

As puerperal infection is the major cause for maternal deaths, much thought has been given to its prophylaxis and therapeusis, and now we have an agent that shows promise of being the most potent ever used for the control of these cases.

Foulis and Barr picked seventy cases of severe puerperal sepsis, many showing positive blood culture, chills, fever and peritonitis, one patient died, giving a mortality rate of 1.4% as compared with 13.4% in previous years. Sulfanilimide is given until the temperature has remained normal for seventy-two hours. Colebrook and Kenny treated sixty-four cases with a mortality of 4.7% as compared with their previous rate of 23%. The results are equally dramatic in infected abortion.

(4.) MISCELLANEOUS STREPTOCOCCIC INJECTIONS:

The drug here is most useful in the mild cases, since it is curative in smaller doses, and is thus relatively free from toxic manifestations. The diseases here include tonsillitis, pharyngitis, mastoiditis, otitis, sinusitus, cellulitus and empyema, all of common etiology; the streptococcus.

From Yale University eight cases of acute mastoiditis were cured with sulfanilimide without operation, one case having destructive mastoiditis and meningeal irritation showing four thousand cells in the spinal fluid and being well in six days.

(5.) GONORRHEA:

The previous multiplicity of treatments in this prevalent social disease attested to the weakness of the therapeutic approach.

Crean and Herrold treated over two hundred cases of acute and chronic gonorrhea in males and reported a ninety per cent cure.

The cases varied from acute anterior urethritis to severe posterior urethritis, epididymitis and prostatitis. They were cured in an average of fifteen days, with the majority sooner than this. No case was considered cured until followed for three months. An important economic phase of this is that the period of disability is decreased by two-thirds. The acute cases respond rapidly usually in two to six days and in no reported treated case of anterior urethritis has a posterior involvement occurred. Use no local treatment. Give eighty grains for one day, sixty grains a day for three days and forty grains for three to five days. The usual general methods of abstinence from sexual intercourse, alcohol and spicy foods are of course followed. Females likewise respond most favorably, but the criteria of cure are as usual difficult. Gonorrheal ophthalmia and vaginitis both respond most satisfactorily to this treatment. G. C. eyes show negative smears in thirty-six to forty-eight hours with rapidly abating symptoms. Dramatic results are seen in gonorrheal peritonitis. Gonorrheal arthritis shows improvement but not rapid cure.

(6.) EPIDEMIC OR MENINGOCOCCIC MENINGITIS:

Schwentker of Johns Hopkins reports the treatment and rapid cure of ten of eleven cases. The cases were in age groups of one year to thirty-four years and eight were critical. Treatment was by intrathecal and subcutaneous sulfanilimide. Pangratz of Germany concludes that it should be used alone rather than in conjunction with anti-meningococcus serum, however, at the present time it is widely used in conjunction with the serum.

(7.) PNEUMOCOCCIC INFECTIONS:

Heintzelman reported nineteen cases of Type III pneumococcus pneumonia. In the nine sulfanilimide treated cases, seven cases recovered with a mortality of 22%. Of the ten untreated cases receiving the usual routine, two recovered and eight died, thus, 74% mortality. The drug has been used in all types of pneumonia, but is most useful in Type III.

Pneumococcic otitis media likewise responds rapidly.

One case of pneumoccic meningitis at St. Louis Children's Hospital recovered under treatment; the first of this disease ever to recover at that institution.

(8.) Undulant Fever:

Three instances of definite cure in active cases of undulant fever are reported. After five to six days of treatment, the fever subsided, all symptoms disappeared and no recurrence was noted after a check-up over several months.

(9.) Malaria:

In the United States Public Health Service from Panama, de Leon reports cures of fifteen cases of tertian malaria with no relapses.

(10.) Diseases of the Urinary Tract:

Sulfanilimide has marked bacteriostatic, and thus potential bacteriocidal effect on all the common bacteria found in infections of the urinary tract except the streptococcus faecalis.

Helmholz states that the usual urinary antiseptics; namely: urotropin, mandelic acid and beta-ozy-butyric acid (ketogenic diet) are useful in subacute and chronic urinary infections, however, they are not satisfactory in acute pyelitis, especially that due to bacillus Proteus in which urinary alkalinity is constantly maintained, or to any case in which reduced renal function makes a urinary pH of 5.5, and minimal concentrations of drugs impossible. Thus sulfanilimide fills in the above mentioned deficiencies; it can be used in the acute stages with the forced intake of fluids and the urinary alkalinization. Thus, certain infections which produce alkaline urine as B. Proteus or the cocci group, or the colon bacillus which splits urea into ammonia, all are resistant to mandelic acid because of the usual high pH of 7.5-8, and these infections respond rapidly and completely to sulfanilimide which is also easier to administer in comparison with mandelic acid and the difficult ketogenic diet. Helmholz, who so vigorously sponsored the ketogenic diet and mandelic acid has done a complete turn about in favor of sulfanilimide, and the toxic manifestations in his group of child patients have been practically nil. Kenny's forty-six cases of severe B. Coli infection responded in two to three days with an absence of pus in the urine, sixteen of these cases had pyelitis of pregnancy and five of these were pre-eclamptic toxemias and none of their toxemia symptoms was aggravated by the treatment.

Weiser reports a case of chronic urinary infection of eight years duration that had resisted all treatment and showed foul suppurative urine; after three days of sulfanilimide therapy the urine was sterile and remained so at a check-up of six months later. A severe typhoid bacilluria was cured in three days' treatment.

(11.) Gas Gangrene:

Bohlman reports three cases of proven gas gangrene with cures due to sulfanilimide. One case involved an entire lower extremity and that leg was saved. The patient was most toxic and had a temperature of 105 degrees; in eighteen hours the temperature was normal, and all toxic symptoms were gone.

The effect on the gas bacillus is undoubtedly specific, but also we must consider the checking of the growth of streptococcus that is usually in symbiosis with the Bacillus Welchii.

Failures:

The sulfonamides are notably useless in infections with streptococcus viridans, endocarditis, chorea and rheumatic fever. The tubercle bacillus is not affected. Group D Beta hemolytic streptococcus is not inhibited.

DOSAGE

The dosage of the drug is not difficult to remember; it varies with body weight but not with the disease treated, in other words, the goal sought is that of a sulfanilimide concentration in the blood of ten milligrams per cent.

An important fact to remember is that the method of administration par excellence is by mouth. If oral administration is not feasible then 0.8% sulfanilimide in normal saline solution is used, and as a final choice prontosil.

Children's Dosage:

Age	Sulfanilimide
Infants	5-10 grs. a day
2-3 years	10-20 grs. a day
4-6 years	20-40 grs. initially and then 5-10 grs. q 4 hours.
6-12 years	30-40 grs. initially and then 10 grs. q 4 hours.

Parenteral Sulfanilimide—

Infants 1 gram of sulfanilimide — 10 lbs. body weight daily as an 0.8 per cent sulfanilimide solution in normal saline. 25-50 lbs. body weight give 100-300 c.c. initial dose and 200-300 c.c. q 8 hours.

The preparation of sulfanilimide for parenteral use is simple. This para-amino-benzene-saline solution at 98.6°F.

The saline is brought to boil and when it ceases boiling add the powdered sulfanilimide 0.8 grams per 100 c.c., then stir well and cool to 98.6°F. and then give by clysis or intraspinally as indicated. It should be made fresh daily.

Prontosil—

Children's Dosage (Con't):

25-50 lbs. use 5-10 c.c. q 4 hours intramuscularly.

50-90 lbs. use 10-15 c.c. q 4 hours intramuscularly.

Do not use this product intrathecally, and it is dangerous when given intravenously.

ADULT DOSAGE:

Sulfanilimide—

Body weight above 90 lbs. give 60-80 grains as an initial dose and then 15-20 grains q 4 hours.

The maintenance dose is continued until definite clinical improvement is observed.

Parenteral Sulfanilimide—

Above 100 lbs. body weight, initial clysis of 700 c.c. with 500 c.c. q 8 hours.

In the intrathecal administration in meningitis, do a complete spinal drainage and inject this solution 5 c.c. less that amount of fluid withdrawn, and always inject by gravity, **never by positive pressure.**

Prontosil—

Above 100 lbs. body weight give 20 c.c. every 4 hours.

TOXIC MANIFESTATIONS

Mild toxic symptoms are quite commonly observed, the chief ones including headache, dizziness, giddiness, anorrhexia, rarely nausea and vomiting. The complaints are seen almost entirely in the ambulatory group, and consequently patients receiving this medication should be urged to stay in bed. The chief antidote for these disturbing symptoms is water or other type of orally administered fluid, which will relieve ninety-five per cent of these mild disturbances. One patient took two hundred grains in twelve hours and experienced cyanosis, dizziness and headache and was given five thousand c.c. of water by mouth in six hours and all signs of toxicity disappeared.

It might be well to mention here that the prontosil solution has been found to produce only one toxic manifestation and that is a febrile reaction, the patient may show an elevation of temperature from 99-102.6 degrees for a few days.

The more serious manifestations of toxicity from sulfanilimide include:

(1.) CYANOSIS: Cyanosis is relatively common when large doses of the drug are used. It varies from a mild bluing of the lips to an intense slaty discoloration of the skin, the lips, conjunctiva and nail beds. Cyanosis is not regarded as an indication for cessation of treatment since it has been noticed that cyanosis may appear as early as five hours after administration of a large initial dose and then disappear despite the continuance of intense treatment. The cyanosis is usually attributed to methemoglobinemia and sulfhemoglobinemia. The cyanosis appears serious, but the danger to life is not great. The presence or absence of sulfhemoglobinemia or methemoglobinemia associated with the administration of sulfanilimide or other drugs derived from aniline results from a combination of hemoglobin with the hydrogen sulfide absorbed from the intestinal tract, the reaction being catylysed by the drug circulating in the blood, and in most all of these cases there is history of previous catharsis especially with magnesium or sodium sulfate. The normal absorption of protein digestion products in the small bowel is diminished by purgation, causing increased putrefaction in the colon, and with a resultant production of hydrogen sulfide, much in excess of normal. The saline cathartics are most active in this process, because their osmotic action maintains the contents of the colon in a semi-fluid state, thus accelerating putrefaction. So a good prophylactic measure toward preventing sulfhemoglobinemia is to forbid the use of cathartics, especially $MgSO_4$, and to give cleansing enemas often during the treatment with a low residue adequate caloric diet with few or no eggs since eggs contain three times as much sulfur as other foods. Avoid its conjunction with phenacetin, amidopyrine and others of the aniline group since these drugs of themselves may cause methemoglobenia or sulfhemoglobinemia. Heretofore the treatment of these conditions has been with oxygen, intravenous glucose and saline, and in serious cases transfusion. In methemoglobinemia oxygen has given some benefit when combined with the measures given above. However, recently Dr. W. B. Wendel has shown that the intravenous injection of 0.1-0.2 c.c. per kilogram body weight of a one per cent aqueous methylene blue solution converts in the course of about 45 minutes all of the methemoglobin in the circulating erythrocytes into functionally active hemoglobin and the cyanosis disappears. The concentration of sulfanilimide in the blood has no relation to the degree of methemoglobinemia. This is a sensational advance, giving relief to a most distressing if not dangerous sequellae to sulfanilimide therapy.

(2.) Rash: Another toxic effect noticed that is especially bothersome to patients is an erythematous rash. This rash is most commonly seen in about six per cent of ambulatory patients, and appears usually between the tenth and fourteenth day in patients receiving large doses of sulfanilimide. The eruption is distinctly morbilliform in character; it is made up of maculo-papular lesions, slightly raised from the surrounding area of unaffected skin, is brownish-red in color, does not fade completely upon pressure; there may or may not be itching, and there is no involvement of the mucus membranes. Fever often accompanies the rash and may reach 103 degrees, drops to normal gradually in two to four days with a continuance of treatment, and disappears within forty-eight hours if therapy is withdrawn. With a resumption of treatment, the eruption does not as a rule reappear, but when it does, it is faint and scattered. All intradermal tests were negative in a large group of cases. The rash has the peculiarity of being photo-sensitive, that is, it seems to be precipitated by sunlight, and consequently is almost invariably seen in ambulatory cases that are subjected to the sun rays. Several cases have been reported of patients receiving treatment that have taken rather long automobile trips and showed marked rash on the side of the face, neck and arms exposed to the direct sun rays. This writer recently saw a street car motorman with a typical rash of his hands with a sharply demarcated border at his coat sleeves—his hands being the only part of his body exposed to the sun rays.

Following this observation of the photo-sensitive character of the rash, a patient showing a rash only of the face and hands was given an erythema dose of ultra-violet to the posterior surface of the legs and in twelve hours this area was the seat of a typical rash.

URTICARIAL REACTION

Salvin reports a severe reaction following primary administration of the drug in which there appeared generalized urticaria, sneezing, dyspnea, lacrimation, intense itching and had no previous allergic history, but intradermal test was positive and negative for any other sulfur compounds. The attack was relieved by adrenalin. Two cases of exfoliative dermatitis, resembling that due to arsphenamine have recently been reported.

As to therapy, have patients avoid direct sunlight as a prophylactic measure, then if the rash appears stop the sulfanilimide, use calomine lotion, force fluids and then resume therapy in a few days.

(3.) Hematopoietic Depression: While the fear of agranulocytosis and acute hemolytic anemia has prevented many physicians from using this very effective drug, it has possibly been overfeared, because only about a dozen cases of agranulocytosis and acute hemolytic anemia have been reported in the literature and of these less than one-third have succumbed.

Jennings of London reports a case where the white cell count dropped to 445 cells with absence of the neutropmilic series, and the patient was treated with liver extract and Pentnucleotide and made an uneventful recovery.

In one of the reported agranulocytic deaths, the patient had a previous history of thrombocytopenic purpura, so here we were dealing with a susceptible condition of the hematopoietic system.

In a very large series of cases at Johns Hopkins only four cases of hemolytic anemia have been reported and all of these recovered after transfusion. However, it is imperative that frequent red cell and leukocyte counts be made on all patients under this therapy.

(4.) Dyspnea: Occasionally marked dyspnea is observed and as this is commonly associated with a low CO_2 combining power, it was originally attributed to an acidosis and thus the rationale for the use of sodium bicarbonate in conjunction with the sulfanilimide. In some very recent work by Hartmann, it was shown that large doses of sulfanilimide may cause hyperventilation, which may be confused with acidosis, however, the pH of the urine is consistently above seven, so the blood change is really a CO_2 deficit type of alkalosis in response to the hyperventilation, so sodium bicarbonate is contraindicated. This ordinarily what happens, however, true acidosis may develop, and in these cases use one-sixth molar solution of sodium lactate subcutaneously.

(5.) Optic Neuritis: One case of moderately severe optic neuritis following sulfanilimide has been reported which disappeared with the drug withdrawal.

CONCLUSIONS

1. There is a steadily accumulating mass of experimental and clinical data which shows that sulfanilimide constitutes a potent chemotherapeutic agent in the treatment of Group A hemolytic streptococcus infections, and since almost all hemolytic streptococci isolated from tne human body are of Group A, then it is readily seen the possibilities of this remedy, likewise the meningococci, gonococci, and a variety of other organisms are lethally affected by this drug.

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Some Unusual Tumors of the Ovary

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THE OCCASION for writing this paper is the recent observation of a number of rather unusual tumors of the ovary. A study of these cases, a review of other rare ovarian tumors and a comparison of the characteristics of a few of the less frequent types, form the basis of this discussion.

Our interest was aroused when about one year ago a case was admitted to the surgical service of St. Vincent's Infirmary, Little Rock, Ark., which proved to be a Krukenberg tumor of the ovary. Shortly thereafter a young woman was admitted to the service for the removal of what turned out to be a thyroid tissue tumor of the ovary. A review of the records showed that during the past 20 years three recognized cases of Krukenberg tumor and one case of straoma ovarii have been admitted to this hospital. I would like to discuss these two types of ovarian neoplasm and briefly review one or two other interesting but rather unusual types which are occasionally encountered by the general abdominal surgeon.

In 1896 Friedrich Krukenberg[1] described a tumor which he designated as the "Fibrosarcoma ovarii mucocellulare, carcinomatodes." It is of slow growth, appearing in both ovaries simultaneously, and affects young and old alike. The entire ovary becomes enlarged and there is little alteration in form or contour, the general shape of the organ being retained. The surface is smooth and firm in consistency, but on cross section shows hard solid portions intermingled with myxomatous areas, and when these latter break down multiple cysts of varying size result. In describing the microscopic appearance Krukenberg states: "The chief characteristic was the inclusion of large round cells blown up like bubbles in the fine tissue between the fibrils of the connective tissue stroma, seen best in the myxomatous appearing areas. The nucleus was out of the center, giving the cell the appearance of a sealing ring." The marked stromal reaction completes the picture, a ? it was this latter finding that led Krukenberg erronously to assume that the tumor was primarily a sarcoma. It is now almost unanimously agreed that these tumors are of epithelial origin and that they are usually secondary to some primary source in the gastrointestinal tract. Ascites is a common finding. They are usually fatal by extension and recurrence.

In most of the reported cases the primary source has been described as being in the stomach. However, it may be elsewhere. Eight years after Krukenberg's original paper Glockner[2] reported 17 cases occurring as follows: 7 in the stomach, 5 in the breast, 3 in the uterus, and 2 in the large bowel. Subsequently, there have been numerous similar reports in the literature. Though usually secondary, or metastatic, there seems to be some well-substantiated evidence to show that these tumors may be of primary origin within the ovary itself. Andrews[3] in 1933 reported his personal experience with 3 cases, one of which was alive after 4 years; Novak[4] had the opportunity to study this case clinically as well as to study the tumor pathologically and is of the opinion that the growth was primary in the ovary. This patient, a 50-year-old female, gave no symptoms or findings referable to the upper abdomen. Frankl[5] reports a similar case, but of bilateral involvement, alive after three and one-half years.

The route of metastasis is the subject of considerable debate. Novak feels that it is most likely by way of the lymphatics. Handley[2] is strongly of this opinion, particularly in cases in which the primary lesion has been found in the breast, in which event he believes the spread is through the lymphatics of the anterior rectus sheath and the suspensory ligament of the liver into the abdominal cavity. Kraus[6], Handley, and others feel that metastasis within the abdominal cavity occurs by means of direct implantation through the medium of the ascitic fluid, transportation being facilitated by the peristaltic movements of the small bowel. Novak feels that the intra-abdominal spread from the stomach to the ovaries is through the common channel of the retroperitoneal lymphatics. Still others, among them Ribbet[8], believe that it is accomplished through the medium of the blood stream. The preponderance of evidence seems to be in favor of the lymphatic route. This is particularly true in those cases in which the primary lesion is found to be in the large bowel, the uterus, or the appendix.

As to pathogenicity, the bilateral secondary type is inevitably fatal. Andrews states: "I have not been able to find a single case of Krukenberg tumor which is known to have recovered permanently." In the early part of this year (1938) Novak stated that, so far as we know, no case of Krukenberg tumor of the common secondary type has been cured by operation, death usually occurring within a relatively short time. Masson[9] states that he has known of no authentic case of this type that did not end fatally. Death usually follows within a few weeks, or months, after the diagnosis has been made.

The clinical findings are not constant. The patient may and usually does give a history or digestive disturbances and epigastric discomfort or pain, coupled with the complaint of pain in the lower abdomen, visible or palpable lower abdominal tumor, or abdominal distension; seldom, however, are there complaints of menstrual disturbances. The manifestations may be protean. In the usual instance the diagnosis is made at operation, or at the autopsy table. The occasional preoperative diagnosis may be said to depend on chance, rather than on correct interpretation of history and physical findings.

I would like to present three cases from the Surgical Service of St. Vincent's Infirmary. Two of these cases were operated by one of my colleagues, Dr. Dewell Gann, Jr., and the third case is my own:

Case No. 1. (Mrs. W. W.): This patient was 35 years of age and the mother of two children. Was first admitted to the hospital on February 1, 1932, with complaint of gas on stomach and indigestion, but no pain. The diagnosis of chronic appendicitis was made and appendectomy performed. The patient was readmitted exactly one year later with complaint of nausea and vomiting during the preceding 8 months. Laparotomy was performed and a scirrhous carcinoma of the greater curvature of the stomach measuring 6x10 cm. was found. A partial resection of the stomach and a Bilroth II type of anastamosis was done. The patient left the hospital about one month later improved. There had been no history of particular menstrual disturbances at any time and at neither operation was the pelvis explored. On the 18th of October, or about 8 months later, the patient re-entered the hospital complaining of a mass in the lower abdomen and pain in the left lower abdomen, but still no menstrual disturbances. Laparotomy was done and two large ovarian tum removed. The right ovary extended up to the diaphragm and the left ovary extended up to the umbilicus. Both were smooth and no evidence of other abdominal metastasis was found. The patient stood the operation well and left the hospital on the 18th postoperative day. Nine months later to the day she returned to the hospital. During the interim the abdomen had gradually increased in size and the patient had become progressively weaker. She received deep x-ray therapy and one transfusion, but of no avail. She went down hill rapidly and died one month after admission. Autopsy showed extensive abdominal carcinomatosis. Diagnosis: Krukenberg tumor of ovary and stomach.

Case No. 2 (Mrs. B.): A white female 33 years of age, married and the mother of one child. Admitted to the hospital October 26, 1931, complaining of distension of the abdomen. Two months before admission she had begun to have frequent attacks of sharp pain in lower abdomen. No history of digestive disturbance. Vaginal examination conformed the abdominal findings of a large mass in the pelvis. Operation revealed an inoperable left ovarian mass with considerable infiltration of the adjacent posterior abdominal wall. No other masses or metastases felt. A piece of tissue was removed for microscopic examination and revealed the typical findings of a Krukenberg tumor. The patient was discharged from the hospital on November 11th, two weeks following operation and was feeling fairly well. Five weeks later she was readmitted complaining of marked ascites. She was quite weak. The abdomen was tapped; the only other therapy consisted in palliative measures and one blood transfusion. The patient expired January 2, 1932, just two months and 6 days after her original laparotomy. Diagnosis: Krukenberg tumor of ovary, bilateral.

Case No. 3 (Mrs. J. W.): Age, 34 years. Married and the mother of two daughters, the youngest 6 years old. Admitted March 9, 1937, with complaint of pain in lower abdomen and profuse vaginal discharge. Ten months previous a posterior colpotomy had been done for relief of a cul-de-sac abscess and this had been done for relief of a fistula. Four days following admission laparotomy was performed and a left tubo-ovarian abscess measuring 8x10 cm. and containing thick, creamy pus was removed. The left ovary had completely lost its identity in this inflammatory mass. The uterus was enlarged perhaps 20 per cent. The right tube was chronically inflamed and its fimbriated end closed and loosely adherent to the right ovary. The right ovary measured 3x6 cm., and though smooth, was almost completely fibrocystic. The right tube was removed and most of the cyst bearing portion of the right ovary was resected. The stomach was not explored. One week following operation the patient vomited a large amount of old blood and it was our impression at that time that it came from the stomach. Patient was discharged on April 9, 1937, 26 days after operation, as improved. Diagnosis: Tubo-ovarian abscess, left; chronic salpingitis, right; and fibrocystic ovary, right. On June 30, 1937, just two months and 3 weeks later, she returned to the hospital in an ambulance with complaint of very severe abdominal pain, mostly low in the right side. Pelvic examination revealed a hard, tender mass in right adnexal region, which felt to be some 10 cm. in diameter. Seven days later exploratory laparatomy was performed and the pelvis was found to be completely filled with a hard, white, knobby, glistening mass that had infiltrated the adjacent parietal surfaces. The omentum and loops of small bowel were so matted together by numerous adhesions and implantations that it was impossible to explore the upper abdomen. A small piece of tissue was removed for microscopic study; the pathologist, who was handy, made frozen sections and within a very few minutes reported that they showed the typical signet ring cells and other findings of a Krukenberg tumor. The abdomen was closed without further ado.

This patient had a stormy and very painful postoperative career and expired on the 12th postoperative day. Autopsy revealed an extensive abdominal carcinomatosis with a large cancerous lesion in the stomach. Sections from the stomach lesion showed the same microscopic picture as sections from the right ovarian mass.

These cases illustrate the insidiousness of onset, the uncertainty of preoperative diagnosis, and the futility of treatment. The abdominal surgeon has frequent occasion to observe a gastric carcinoma in a female, but how often does it occur to him to investigate the pelvic viscera, particularly the ovaries, after he discovers the piece de resistance in the epigastrium? His curiosity in gastric carcinoma seldom extends beyond such organs as the gall bladder, the liver, the pancreas, the omentum and the more easily accessible lymph nodes. Similarly, how often does the pelvic surgeon think to investigate the stomach, when he finds a solid tumor of the ovaries, particularly when it is small. Even the ubiquitous fibrocystic ovary has become to him such a commonplace finding that he has come to regard it as a normal bit of anatomy in any female in or past the middle decades of life. In Case No. 3 described above, an only moderately enlarged fibrocystic ovary was found. There was nothing unusual in its appearance. The cystic portion was resected, as is so often the practice, and both it and the procedure were considered insignificant. However, after the second laparotomy and the discovery of the true nature of the growth in the pelvis, these resected scraps of ovary were dug up out of the laboratory specimen cabinet and microscopic sections made; a study of these revealed, much to our horror and chagrin, the typical myxomatous tissue, the stromal reaction, and the signet ring cells of Krukenberg. So significant, or unimportant, had these bits of tissue appeared that the pathologist had not even thought it necessary at the time of the original operation to section them for microscopic study.

It is a safe and comforting practice to have the hospital pathologist on the scene whenever a cystic tumor of the ovary is to be removed; frozen sections of the medullary portion of these tumors may reveal malignant changes in an otherwise innocent looking specimen, enabling the operator to act accordingly. The ordinarily innocent and common pseudomucinous cystadenoma of the ovary may show unexpected and serious changes. Quite often in such a cyst one encounters epithelium, and Counsellor[10] reports 7 cases of squamous cell epithelioma in teratomatous cysts of the ovary, in which class the pseudomucinous cyst is placed by some.

It is a general rule that in carcinoma of the uterine adnexa if metastases have formed, the prognosis is bad. Infiltration of the uterus, vagina, and bladder have been reported by Jarcho[11] and others, and we agree with the former's statement that whenever this has taken place, surgery should not be attempted. On the other hand, a number of authors, among them Masson, of the Mayo Clinic, have reported the removal of both primary and secondary lesions with the survival of the patient for a number of years in comparative comfort; in some deep x-ray therapy was used as a postoperative therapeutic adjunct. Generally speaking, though, few patients have survived diagnosis and any attempted therapy for more than a few months. X-ray therapy per se is of doubtful benefit; in some cases it even appears to hasten the dissolution.

Besides the cystadenomata, another type of tumor that is occasionally confused with the Krukenberg tumor is the Granulosa Cell Tumor, first described by Rokitansky[12] in 1855. It is not a common tumor, as only some 200 cases have been reported in the literature to date; however, within the past 7 or 8 years considerable new interest has been taken in it. There are two theories as to its origin: Meyer[13] believes that it arises from the embryonal rests of germinal epithelium, the so-called granulosa cell rests; the other is that it arises from the follicular epithelium. The former theory is the one now generally accepted as the most likely explanation. Microscopically, a variagated picture presents itself· adenoma-like and sarcoma-like patterns are seen and the latter structure has influenced many into classifying the tumor as a sarcoma. Grossly, wide variations in size have been reported. As a rule, the tumors are of moderate size, ovoid, with smooth outer surfaces, and occasionally, are lobulated. The younger tumors are more solid; the older ones show cystic degeneration.

These tumors are of principal interest because of the clinical manifestations. These manifestations are most noticeable in the age brackets in which evidence of sexual activity is least expected. The chief biologic effects are seen in disturbances in menstruation and precocious sexual development. In the sexually mature there is seen menstrual excess with periods of amenorrhoea; in the postmenopausal group a resumption of menstrual activity and a sort of rejuvenation, and in children before puberty a precocious development of the secondary sex characteristics. The specific biologic effect is due to the fact that they secrete folliculin (Novak[14]). Frequently, prolan A is found in the urine. In some instances the Ascheim-Zondek reaction has been found positive. Meyer[15] reports the case of a five-year-old patient who menstruated regularly and who had all the secondary sex characteristics of a mature woman, as evidenced by overgrowth of breasts and a heavy suit of pubic hair. Examination revealed a large mass in the lower abdomen. At laparotomy a bilateral tumor of the ovary was found. The left ovary was removed, but a small portion of the right ovary was conserved. Vaginal bleeding and breast overgrowth disappeared, but reappeared after 3 years. Permanent disappearance of these abnormal manifestations did not take place, however, until the remaining ovary, which in the meantime had become greatly enlarged, was removed.

These tumors are definitely malignant, but of a degree of activity much less than that of ovarian cancer in general. By some authors they are considered relatively benign. Treatment is essentially surgical; salpingo-oophorectomy on the affected side usually suffices in younger patients; hysterectomy with bilateral removal of the tubes and ovaries is the procedure of choice in those patients approaching or past the menopause. Radiation therapy should be restricted to the treatment of inoperable cases or to preoperative or postoperative uses in conjunction with surgery in the treatment of removable tumors.

I would like to discuss briefly one more type of ovarian tumor and present the following case:

Mrs. McN.: A white female, age 51, married and mother of four children, was admitted to St. Vincent's Infirmary to the service of Dr. H. W. Hundling, with the diagnosis of ovarian cyst. On July 3, 1938, a few days after admission, she was operated and bilateral ovarian cysts were removed. On the right side the cyst was some 20 cm. in diameter and completely filled the pelvis, overflowing the brim. It was found to contain a pinkish, serous fluid. A small cyst some 10 cm. in diameter was found to occupy the left ovary. On section this latter was found to contain a thick, gelatinous, chocolate colored fluid. Sections from the medullary portion showed the typical structure of a foetal adenoma of the thyroid gland. Sections were sent to Dr. Broders of the Mayo Clinic, who confirmed the diagnosis of foetal adenoma made by the St. Vincent's pathologist, Dr. M. J. Kilbury. The patient was discharged 17 days after operation, having had an uneventful postoperative career.

This patient showed no preoperative symptoms referable to the thyroid gland. Since leaving the hospital she has showed no untoward results of operation.

Some fifty or more cases of stroma ovarii have been reported in the literature. Bauer[16] assumed that this tumor was a pseudomucinous cystadenoma, but this contention is stoutly denied by Moench[17], who believes that it should be classified as a teratoma. The latter author presents a very interesting case in which the patient showed the symptoms of a thyrotoxicosis. After removal of a medium-sized ovarian cyst, for which this patient was admitted to the hospital, all these phenomena disappeared. Kovacs[18] and Bua Collisto[19] both find symptoms of thyrotoxicosis in cases of stroma ovarii, with disappearance of these findings after removal of the offending ovarian cyst. Heinsen[20] in a very comprehensive article does not unreservedly subscribe to this theory, saying that the symptoms of tachycardia, nervousness, weakness, and the changes in metabolic manifestations may in part be due to factors other than those generally attributed to a dysfunction of thyroid tissue. Such a theory, however, has a strong appeal to one's immagination.

SUMMARY

The above cases are reported and discussed with the hope that the diagnostician and the operator may give more careful attention to the patient with history of digestive disturbances and findings of ascites and adnexal tumors in the pelvis. Also, it is hoped that these case histories may stimulate the operating surgeon more carefully to examine both poles of the abdominal axis whenever malignancy is discovered in either region.

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Christmas

Bethlehem's Star

Written in the Chapel of the Manger in
the church at Bethlehem, Palestine.

Star of hope to souls in night,
Star of peace above our strife,
Guiding where the gates of death
Open to the endless life;
Wanderer from the nightly throne
Which the Eastern heavens gem,
Guided by the angels' song
To the child of Bethlehem.

Not alone on Judah's hills
Have earth's weary pilgrims trod;
Nor have heirs of David's throne
Solely right to "reign with God."
But, where'er on this green earth
Earnest faith and longing are,
Heavenly light and hope have birth
'Neath the smile of Bethlehem's star.

—Author Unknown.

THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

W. H. ANDERSON, M.D., Editor-in-Chief
MILDRED P. ANDERSON, Assistant Editor

OFFICIAL ORGAN OF
Mississippi State Medical Association
Mid-South Post-Graduate Medical Assembly

LILA SINCLAIR, Blue Mountain College, Artist
DAVID E. GUYTON, Blue Mountain College, Poet

Mid-South Post-Graduate Medical Assembly

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Published monthly at Booneville, Mississippi

Annual subscription $1.00

Entered as second-class matter, January 19, 1926, at the post-office at Booneville, Miss., under the Act of March 3, 1870.

The meeting of the Presidents, Presidents-elect, Secretaries and Editors, in Oklahoma City during the Southern Medical Association was a great success. There have been but few meetings of a medical group in the entire history of American medicine of more importance than this one. Our own Dr. Harvey F. Garrison, Sr., conceived the idea of this organization three years ago. The time was propitious and the opportunities great for just such an organization. Thus far he has handled the meetings exceedingly well and was at the close of the meeting in Oklahoma unanimously elected presiding officer for the ensuing year.

Medical problems are squarely before the profession and the people, especially medical economics, socialized medicine, the matter of adequate medical care to all the people. Every member of the medical profession and the people at large need to consider the questions before us in all earnestness and in all sincerity. A conference like the above holds the key to safe procedure. The outstanding leaders of organized medicine were present and also practitioners fresh from the commercial firing lines of the public in the rural and small town communities.

The spirit of this meeting was beyond description. You had to be present and feel it really to know. We doubt if there has ever been a meeting of such earnestness and sincerity of purpose, such a brotherly spirit of cooperation to find exactly the right solution to a question that means so much to the American people. This meeting courageously expressed faith that the American Medical Association and the American Public Health Association are on the job leading the entire profession, determined that the situation will be met in keeping with the achievements of a profession that is able, noble and true in service to mankind.

Dr. Irving Abell, president of the American Medical Association, spoke to the group. In his easy and pleasing manner he left no doubt in the minds of the hearers that he is master of the situation and is a safe leader. The courtly and cultured Dr. Jervey, president of the Southern Medical Association, confidently expressed his good will and approval. President Garrison, after his able address, presided in a manner conducive to the free expression of every one present. Dr. Cary of Dallas, Texas, a past president of both the American and the Southern Medical Associations, a man very influential with the President and the leading political thought of America, spoke as one with authority. His speech was very instructive, strong in its power of decision and radiating hope for a future bright with continued appreciation for the service of the profession. Dr. W. E. Vest, a third member of the committee of the American Medical Association selected to confer with the President or his representatives, sat in on the meeting. His quiet, kind and dignified manner bespoke much power and sincerity of purpose. He was elected president of the Southern Medical Association at the close of the meeting. Dr. Arthur McCormack, executive secretary for Kentucky and a member of the American Public Health Committee, and who was elected president-elect of the Southern Medical Association on the following night, delivered an address on the increasing membership in the state associations and its importance. His speech revealed a wonderful grasp of our present problems, well balanced ideas, and an eloquence which seemed to be activated with a touch of inspiration more divine than human. Dr. Felix J. Underwood, of Mississippi, speaking on the apparent needs of more adequate medical and hospital care, inspired some very serious thought in the minds of all present. Dr. J. N. Baker, executive secretary of the State Board of Health of Alabama and a member of the Committee of the American Public Health Association along with Underwood and McCormack was present and gave very close attention to all that was said. Dr. H. H. Shoulders, editor of the Tennessee Journal and speaker of the House of Delegates of the American Medical Association, also listened in with rapt attention throughout the session. His mien revealed a man of broad information, forethought and diplomacy.

More than fifty leaders in organized medicine were present in what might be termed a declaration of independence in the interest of better health service for the people.

The Northeast Mississippi 13-County Medical Society is putting on one of its best at Tupelo on the 13th, one week ahead of its regular time. There will be a big attendance. Tupelo is centrally located and is a fine town. The doctors are very cordial and the druggists most co-operative. Tupelo is steadily growing as a medical center. Don't fail to attend your district society and do not forget the most important thing, that of paying your dues. As time goes on we must learn more and more to deal with medical problems. Organization and brotherly co-operation are needed more than ever before in the profession. The very least thing a doctor can do is to pay his dues. So let us attend to this matter now.

"After all, we judge the greatness of parents in a large measure by the average citizenship of their children and herein Dr. and Mrs. Charlie Murry have a right to be very happy. The older son, Dr. Vance, is connected with the Gamble-Montgomery Clinic at Greenville which is outstanding in the South and he is making good in a big way. Miss Mary Miller received her degree at Northwestern and is now a member of the faculty at Copiah-Lincoln Junior College at Wesson; Miss Eudora is a college graduate and a member of the faculty at Port Arthur, Texas, and Charles Miller, the younger son, is making a fine record as a student at Millsaps College. Surely this type of children must make their hearts swell with pride." In the write-up of the Murry family featuring Dr. Charlie, the above paragraph relative to her childern was left out in the make-up.-ED.

Mississippi has one of the finest hospitals in the world for treating tuberculosis. It is destined to become a great teaching center, is already. Its field service is very fine. But in connection with this institution we have another that has even more far reaching possibilities than the Sanatorium if we would only give it the support it deserves. It is the Preventorium. Some children are more susceptible to tuberculosis than others, as is the case in many diseases, including heart, kidney, etc. But certain environment, exposure to the disease, poor food, scant clothing, bad housing, may cause the soundest and the most resistant child to fall heir to the disease. The child from this type of environment the Preventorium is striving to serve. It takes children from four to eleven and in the nine years that it has operated it is said that no child that has been there for the allotted time has developed tuberculosis. This record should be very convincing. At the Preventorium the children are taught habits that lead them around this devastating disease. We want to commend the women of this state for their interest in this association, especially the members of the Woman's Auxiliary. Mrs. Henry Boswell has been a very active friend of the institution as have all the officers of the Auxiliary. Mrs. John Howell is now urging loyalty to this institution and support for it. The thinking men of the profession and the laity as well should stand by and support the Preventorium in the interest of farsighted and constructive prevention of tuberculosis.

The symposium on automobile fractures at the Southern Medical on the last day of the meeting was very timely and most instructive. The able address of the chairman, Dr. Venable of San Antonio, was on the general aspects of automobile injuries. The management of compound fractures were ably discussed, followed by injuries of the brain and cord, bony pelvis, thoracic injuries, and injuries to the extremities. It was the type of session that every member of the profession would have done well to sit in on and with good profit. Not only general and specific treatment was discussed, but some hints on prevention were suggested. This was refreshing. The leaders in surgery must begin to study and to lend their aid to preventive surgery if they are to hold the respect of the public and to serve the people in keeping with their noble calling. It was a deplorable oversight that during the course of the discussions in this big field of traumatic surgery that the cause responsible for fifty per cent of automobile injuries was entirely untouched, or practically so. The drinking driver is responsible for not less than fifty per cent of automobile accidents, in our opinion. The drinking of whiskey in this machine age in which we live is just as much out of date as an ox cart. Just suppose each man doing traumatic surgery would take a blood test of every person in a wreck and record the facts for even a five-year period; what a boon it might prove to preventive surgery. The scientific knowledge of traumatic surgery is being applied to the nth degree, which is very wonderful, but we need to broaden the base and help the general public to deal with preventive measures in a more effective manner.

HYGEIA is the great health magazine published by the American Medical Association. It should be in every school, in every home, in every library. This journal is making a special offer. Five dollars pays for three years, or for three subscriptions for one year and then additional subscriptions for $1.25 each. Take it for your home or send it to a friend. It will be fine health food. Mail your order to American Medical Association, 535 North Dearborn Street, Chicago, Ill. Tell your clientele about the great health journal, HYGEIA,

A leading surgeon who is superintendent of one of Mississippi's best equipped hospitals was looking out for a young man to assist in operations and to do internal medicine. He spoke to the dean of one of the outstanding medical schools of the South about some young man to fill the place. The dean advised him to secure a young man who had no internship or at most one year and not to make the salary so attractive for the first year. Now this statement should stimulate thought in many directions in the field of medical service. The greatest problem in the proper distribution of medical care comes in getting young men who are worthy and well qualified to go to the small town and rural community and assume even a portion of the responsibilities that the older men have been carrying. From their standpoint they have spent much time, hard study and money to obtain their medical degree and complete their internships. This cannot be denied by any one. With the demands for more expert service growing stronger from the public there is nothing to do about this part of the picture. But if there is still need of general practitioners and general surgeons, the medical schools and the hospitals might be able to change the situation to some extent. The graduate intern has been taught in terms of expensive equipment, unlimited supplies, specialization, vacations, golfing, fancy fees—which are fewer than the intern really knows—hours and vacations, until he just does not feel at home any more where he was raised. He has had his wagon hitched to a star during the course of his training, but he has not been taught that it takes axle grease and a pry pole to turn the wheels toward the goal. He is bouyant with the get-rich-quick idea, but seems not to have been taught that long hours, short pay, and human sympathy are still essential for a successful start. Before medical service can be carried to the small town and rural community as completely as it should be, the medical schools and the large hospitals will probably have to exert a little effort to educate the medical student a bit differently.

You will note the new one half page ad of the Kay Surgical Company of Memphis. We appreciate this cooperation very much. We feel sure this company will give you good service. Everything else being equal we would like very much for you to trade with the companies who cooperate with us by advertising. This will not cost you anything and it will help us very much.

The Medical Fraternity of the Mid-South deeply regrets the death of Dr. Willian T. Black Sr. of Memphis. He has been for many years a leader in organized medicine. He was a safe consultant in his chosen specialty of Gynecology and will be greatly missed by the practitioners of this section. Dr. Black was a courtly and courteous gentleman who commanded the profound respect of all who knew him. His surgical judgement was good and his personal interest won the love and the appreciation of his clientele. We valued his friendship most highly and deeply regret his going. We offer our deepest sympathy to the devoted faimly who will miss him most.

The Central Medical Society continues to march forward in progress. It has certainly put on a great course for the doctors of that city and territory during this year. The last was by Baylor Medical School. Other societies and other hospitals are doing this. The staff of the Houston Hospital has been outstanding in this. The bringing of medical education to the busy practitioner is a step in the right direction. Vicksburg has been a leader in this with her annual meetings. The courses given over the state for the last few years under the direction of the Mississippi State Board of Health, the State Medical Association, and the Commonwealth Fund have been very helpful.

Mississippi has no large cities, but this state is certainly taking the lead in the development of rural medicine. This is as it should be. Medical service must be carried out to the rural sections. The increase of traumatic surgery makes this very important. Better service in obstetrics offers a fine field of service in the small town and rural communities and we are delighted to say that our men are meeting the responsibility.

The ideas of the practitioners out in the rural communities should be known and fully considered before action is taken by the American Medical Association. The committee of this association is no doubt attending to this.

We offer our cordial congratulations to Dr. F. Michael Smith of Vicksburg on his election as president of the Mississippi Public Health Association to succeed the very efficient Mr. Kroeze. Dr. Smith is one of the ablest county health officers in this state. He radiates the spirit of public health from his missionary heart. With ease and efficiency he keeps his county in the front ranks of public health service. He will make a fine president of the association.

The New Orleans Graduate Medical Assembly will hold its annual session in February 6-9 inclusive. You will see a complete list of the speakers in the next issue of the journal. With a graduate assembly in New Orleans and in Memphis in February, Mississippi will be well supplied with professional feating.

We deeply regret the death of Dr. O. L. Williamson of Marianna, Ark., which occurred on November 28. He was born at Oakland, Miss., in 1877, but had practiced in Marianna about forty years. He was a former president of the State Board of Health of Arkansas, served for a long while as county health officer, and was president of the First National Bank of the city. He was an outstanding leader in civic affairs as well as organized medicine.

This writer was recently privileged to be the "guest of honor" at a meeting of the Walker Medical Society in Jasper, Ala. U. S. Senator John H. Bankhead was also a guest. A very strong and interesting paper, protesting against some of the proposed innovations in medical service, was read by Dr. Jackson of that city. Senator Bankhead was asked to speak after this paper. He spoke very cautiously and diplomatically. He stated that, as yet, this subject had never been presented in concrete form on the floor of the national congress—said he felt very confident that a bill (or bills) would be forthcoming in the approaching session and that he strongly suspected that the matter would be legislated upon. But that until such time as such a bill should be presented, he preferred not to commit himself. He further said that when a bill of this nature should be offered he would give the matter his best and closest study and would vote in what should appear to him to be in the interest of the whole people, not for a moment forgetting the interests of progressive medicine and the members of the medical profession also. He said that he could not bring himself to forget the faithful and self-sacrificing service doctors had always rendered the public as well as the wonderful scientific advances that had been made in medicine under the existing regime. Now, we predict that some wild and fantastic schemes will be proposed and we feel sure the politicians, both among the doctors and the laity, will be most active and persistent. In fact, we fear that the results of this prospective legislation will be both radical and disasterous. We know that a very able and influential committee has been selected by the A. M. A. to work out some program on which all can agree. But it is not fair to this committee and not fair to the doctors of the nation, as well as not fair to the millions of people throughout the country to expect this committee to do all the work and assume all the responsibility in this crisis. It is incumbent upon every doctor who is capable of constructive thought to give serious consideration to this subject and to bring all his influence to bear on his representatives in Congress. Every doctor should consider himself bound to do his utmost to educate his clientele to a proper conception of the great importance of not placing the administration of such laws as are likely to be passed in the hands of politicians who are wholly ignorant of those who will fall sick in the future. Let each county society devote its time and talent to this subject until such time as the matter is settled and settled right. Of course, we do not presume to say or think that we could present a plan that would best meet the needs of the situation, but we will venture to suggest, in brief, some things that we think should enter into any legislative plan and the administration of such a plan. We think that any person who has been adjudged indigent should be given a card so stating, and that this card should be sufficient authority for the doctor to render service and bills; for service so rendered should be paid out of funds provided as suggested above. These bills, of course, should be subject to review, approval or rejection, by some adequate and responsible committee. These accounts and bills should be kept and presented in some provided and intelligent form. They should be presented and PAID monthly, if found correct and honest. All doctors who are legally qualified should be permitted and expected to participate in this work, but they should be held subject to any by-laws and regulations promulgated by regularly constituted and organized medical societies and associations. There are many other phases and conditions that we might propose, but these are the necessary and salient features that we think should be built into any law looking towards the regulation and provision of medical care for the needy and indigent. But we would emphasize the fact that is most apparent to us: namely, that **hospitalization** is being over-stressed by both doctors and the public. Hospitals are simply places where doctors can give medical care to those who need medical attention. It is, at least, a competent doctor that sick people need and not simply a place to be sick. Again the **home** has always been—always will be—and always should be the proper place for sick people to be cared for. However, the people who most need hospital accommodation and care are the **indigent**—those who have no adequate home environment. Those people who are financially able to pay for hospital care and efficient nursing, practically always, have good home environment and can secure capable nursing there at less expense than at hospitals. Furthermore, statistics show that recoveries are quicker and fatalities are fewer than in even the best equipped and best regulated hospitals. G. S. B.

DR. H. KING WADE

Dr. H. King Wade, Hot Springs, Ark., who is appearing on the program at the December meeting of the Northeast Mississippi Thirteen County Medical Society, which convenes at Tupelo on Tuesday, December 13. We are delighted to have this home boy come back after making such an outstanding success in his chosen field.

FROM OLE MISS MEDICAL SCHOOL

Members of the staff who attended the recent meeting of the Association of American Medical Colleges in Syracuse, New York, found the program both interesting and instructive. Thomas Parran, Surgeon-General, U. S. Public Health Service, discussed the future of the public health movement, emphasizing the necessity for co-operation on the part of the medical profession. Doctor J. G. Fitzgerald, University of Toronto, W. S. Leathers, Vanderbilt University, Frederick F. Russell, and Harry S. Mustard discussed the place of preventive medicine in the medical curriculum. A symposium was also devoted to the subject of "Home Visits by Medical Students as a Teaching Asset." Dr. Reginald Fitz, director Evans Memorial Hospital and professor of medicine, Boston University, spoke on the subject, "When and How Shall Interns be Appointed," his paper provoking a great deal of discussion. From the discussion it appeared that better co-operation between medical schools and hospitals in the matter of appointment of interns is essential. Other interesting papers were read on the subjects of "The Teaching of Syphilis,," "Clinical Clerkships," and a study of "Aptitude Scores, Premedical Grades, and First Year Medical Grades During Six Years at West Virginia University." Dr. Willard C. Rappleye of Columbia University was installed as the new president of the organization and Cincinnati University School of Medicine, Cincinnati, Ohio, was decided upon as the place at which the 1939 meeting will be held.

A new book, "Marihuana—America's New Drug Problem," by Robert P. Walton, Ph.D., Professor of Pharmacology, University of Mississippi Medical School, has recently been announced by J. B. Lippincott, publisher. The book deals with both the biological and sociological aspects of the drug.

The regular monthly staff meeting of the School of Medicine will be held on Monday, Dec. 12, in the auditorium of the Graduate Building. Dr. Conley H. Sanford and Dr. Charles H. Heacock of the University of Tennessee Medical School Faculty, will address the meeting, Dr. Sanford speaking on heart disease and Dr. Heacock discussing x-ray diagnosis.

The Committee on Scientific Research of the American Medical Association has recently notified Dr. A. R. Buchanan, Professor of Anatomy, University of Mississippi Medical School, of a grant to finance research on the anatomy of the vestibular division of the eighth nerve.

Miss Ross Jeffress, librarian, Rowland Medical Library, makes the following announcements.

Books and monographs may be borrowed for two weeks with the possibility of renewal for two weeks, provided the borrower will pay postage both ways. A reprint file was begun in 1937 and is kept up to date. Requests for reprints can be filled either by author or subject. Duplicate copies of the A. M. A. J. from 1933 are on file and can be borrowed as single numbers. Copies of a few other journals are also available as single numbers.

NEW BOOKS

Alvarez, W. C.: "Nervous Indigestion." 1930.

American Public Health Association: "Standard Methods for the Examination of Water and Sewage." 8th ed. 1936.

Clendening, L.: "The Human Body." 3rd ed. 1937.

Da Costa, J. C.: "Selections from the Papers and Speeches." of. 1931.

Ellis, H.: "Studies in the Psychology of Sex." '936.

French, H.: "An Index of Differential Diagnosis." 5th ed. 1936.

Kurtz, C. M.: "Orthodiascopy; An Analysis of Over Seventeen Hundred Orthodiascopic Examinations." 1937.

McCartney, W. N.: "Fifty Years a Country Doctor." 1938.

Meagher, J. F. W.: "A Study of Masturbation and the Psychosexual Life." 3rd ed. 1936.

Oliver, J. R.: "Fear" 1935.

Ormsby, O. S.: "A Practical Treatise on Diseases of the Skin." 5th ed. 1937.

Rademaker, G. G. J.: "Reactions Labyrinthiques et Equilibre; L'ataxie Labyrinthique." 1935.

Wistar, I. J.: Autiobiography of. 1937.

SOUTHERN MEDICAL JOURNALS WANTED

The Abner W. Calhoun Medical Library of Emory University, Georgia, is collecting Southern periodicals of all dates. Any one who wishes to have such old medical journals reserved and would like to donate them to this library is requested to communicate with Miss Mildred Jordan, the librarian, at the above address. It is thought that such literature might be found especially in the libraries of the older practitioners. Complete files of Southern medical periodicals for the past two or three decades are possessed by the Calhoun Library, but most files of the older periodicals are very incomplete. The Calhoun Library extends its services to members of the medical profession all over the South. Usually the journals desired are lost, destroyed or stored away in places where they are never seen. At the Calhoun Library they will be taken care of indefinitely in a place where they will be available to medical students and members of the medical profession.

DR. H. CONLEY SANFORD

Dr. H. Conley Sanford of Memphis, who is a leader in scientific medical thought in this great medical center and is very active in organization.

PROGRAM OF THE NORTHEAST MISSISSIPPI THIRTEEN-COUNTY MEDICAL SOCIETY

FOURTH QUARTERLY MEETING
Tuesday, December 13, 1938
TUPELO FIRST M. E. CHURCH
Lee County, Mississippi
1:00 P. M. Promptly

Following the Scientific Program and for the third time, Thomas-Kincannon-Elkin Company, with P. K. Thomas, president, is entertaining the doctors, with their wives, with a banquet.

There will be further entertainment given during the meal by the doctors of Lee County.

PROGRAM

Meeting Called to Order by the President—Dr. R. J. Brown, Iuka.

Invocation—Dr. W. A. Tyson, M.D., Pastor First Methodist Church.

Reading and Adoption of Minutes of Last Meeting.

"Pentothal Sodium As An Intravenous Anesthetic"—Dr. R. T. Dabbs, Verona.

"Primary Carcinoma of Prostate"—Dr. F. M. Davis, Corinth.

"Some Experiences in Simple Methods of Treating Fractures"—Dr. V. B. Philpot, Houston.

Address: "Types and Treatment of High Blood Pressure"—Dr. Conley H. Sanford, Memphis.

Address: "Urinary Infections, with Special Reference to Their Medical Management"—Dr. King Wade, Hot Springs.

Dr. King Wade will speak to the Ladies Auxiliary at 2 p. m.

MISSISSIPPI VALLEY MEDICAL SOCIETY 1939 ESSAY AWARD

The Mississippi Valley Medical Society offers a cash prize of $100,000 a gold medal and a certificate of award for the best unpublish essay on a subject of interest and practical value to the general practitioner of medicine. Entrants must be members of the American Medical Association. The winner will be invited to present his contribution before the next annual meeting of the Mississippi Valley Medical Society at Burlington, Iowa, September 27, 28, 29, 1939, the Society reserving the exclusive right to publish first the essay in its official publication—The Mississippi Valley Medical Journal (Incorporating the Radiologic Review). All contributions must not exceed 5000 words, be typewritten in English in manuscript form, submitted in five copies, and must be received not later than May 1, 1939. Further details may be secured from

Harold Swanberg, M.D., Secretary,
Mississippi Valley Medical Society,
209-244 W. C. T. U. Building, Quincy, Ill.

The 1938 winning essay, as well as several other essays which received meritorious consideration in the 1938 Essay Contest, appears in the Jan., 1939, issue of the Mississippi Valley Medical Journal (Quincy, Ill.)

COMING MEETING

The Southern Section of The American Laryngological, Rhinological and Otological Society will meet in New Orleans on Saturday, January 14, 1939, at the Roosevelt Hotel. The meeting will start at 9 o'clock in the morning and papers will be presented by prominent otolaryngologists of the South. The profession is cordially invited to attend.

DELTA MEDICAL OFFICERS FOR 1939

The following is a list of the officers of the Delta Medical Society for 1939:

President, G. Y. Gillespie, M.D., Greenwood; President-elect, B. H. Higdon, M.D., Sunflower; Vice-Presidents, W. W. Hall, M.D., Shelby, (Bol.), J. W. Barkley, M.D., Belzoni, (Hum.), J. C. Adams, M.D., Greenwood (Lef.), U. S. Wasson, M.D., Sunflower, (Sun.), J. G. Archer, M.D., Greenville, (Wash.); Secretary and Treasurer, F. M. Acree, M.D., Greenville.

CELEBRATES FOUNDERS' DAY

The Medical College of Virginia, Richmond, celebrated Founders' Day marking the one hundred-first anniversary of its founding on Thursday, December 1. Mr. Virginius Dabney, Editor of the RICHMOND TIMES-DISPATCH, spoke on "Medicine in a Changing World." The exercises were preceded by academic procession of visitors, faculty, and members of the student body.

COMING MEDICAL MEETINGS

Florida Medical Association, Daytona Beach, 1939.

Alabama Medical Association, Montgomery Ala., April 18-20, 1939.

Georgia Medical Association, Atlanta, Ga., May 9-12, 1939.

Southeastern Surgical Congress, Atlanta, Ga., March 6-8, 1939.

Ohio State Medical Association, Toledo, May 3-4, 1939.

American Medical Association, St. Louis, May 16-19, 1939.

American College of Physicians, New Orleans, March 27-31, 1939.

American Congress of Obstetrics and Gynecology, Cleveland, Sept. 11-15, 1939.

BOOK REVIEWS

Another of the valuable series of synopses being published in uniform binding by the C. V. Mosby Company, St. Louis, is a second edition of Dr. W. E. Bray's SYNOPSIS OF CLINICAL LABORATORY METHODS. Dr. Bray, who is professor of clinical pathology at the University of Virginia, compiled his book after years of experience and efforts at solving laboratory problems. The volume is complete, minus unnecessary details, terse in direction and explicitly clear. It is a manual that deserves a place for everyday reference right on the laboratory shelf. For what practitioner today is prepared to give adequate care without laboratory findings to aid him in diagnosis and therapy?

General rules for examination precede the routine procedures for urinalyses, blood examination and chemistry, gastric, intestinal, spinal, sputum tests, bacteriology, allergy, metabolism and the methods generally employed for complete findings. Newer procedures included are:

Among the additional procedures in this edition are: serum phosphatase determination, titration of staphylococcus antitoxin in the blood serum, Ivy bleeding time, peroxidase-Giemsa staining method, cough plate method for diagnosis of whooping cough opsonocytophagic test for determining the immunity status in indulant fever, the halo or diffration method for measuring erythrocytes, vitamin C titration, determination of cyanates in the blood, 'phthalein elimination curve, determination of sulfanilamide in the blood, the differential heterophile agglutination for infectious mononucleosis, test for morphine in the urine, and the optimum dose titration of antigen for the Wassermann test.

The value of this book for daily use in its field cannot be over-emphasized. Price $4.50

You Can Sleep Well, by Edmund Jacobson, M.D., and published by the New York Whittlesey House, McGrawo-Hill Book Company, Inc., is a most interesting book. The time is certainly propitious for a book on sleep. Force, pressure, and worry are not conducive to sleep, Which is not inclind to favor a person in this attitude of mind and body. "Depression psychosis" is not compatible with sleep or relaxation. Just lately the evil efeats of the promiscuous taking of the barbiturates have been observed generally. In this book the author demonstrates the futility of resorting to these drugs by describing a person on a wakeful night who seeks a cure but later feels worse. He discusses sleeping medicines, what prevents sleep and what favors it. Then he takesup in six chapers that many steps in explaining how to sleep well, going into detail how sleep may be achieved without drugs. Surely this type of sleep would mean much to a troubled world at this time. An interesting discussion is given to "Your Child's Sleep," and a full chapter on dreams, the whys and wherefores of them. Dr. Jacobson explains the part the mind plays in sleep and indicates how it may be put to rest. Laboratory tests are described demonstrating how sleep can be secured and how it may be measured. In the last chapter a full discussion is given in defining sleep, picturing just what it is.

This most interesting book may be had from the McGraw-Hill Book Company, 330 West 42nd, New York, N. Y., for only two dollars.

The Second Edition of the *Interns Hand Book* is now off the press. It is published by the J. B. Lippincott Company, Philadelphia. It is written as guide, especially in emergencies, for the intern and physician in general practice by the members of the faculty of the College of Medicine, Syracuse University. It is compiled under the direction of Dr. M. S. Dooley, chairman Publication Committee. Part One takes up relationship, intern, hospital and the public. Medical jurisprudence is discussed in a practical manner, giving helpful information on death certificates and wills. Part Two is given for emergency tests including stainings, methods, blood chemistry, x-ray, et al. Medicine is the third division: history taking, physical examination and treatment of every type of case is discussed briefly but to the point. The essential information is given so that it may be easily followed. Surgery with its many divisions and emergencies is covered in the most concise and practical manner. Anesthesia is included in the surgical division.

Diet, drugs and serums are discussed giving the very latest application of each. The latest treatment for syphilis is given liberal space. The uses of serums and antitoxins come in for their share. The last chapter is on nursing, its technique and a discussion of mechanical devices. The intern has many emergencies to meet, and so does the practitioner, especially of recent years when traumatic surgery in civic practice is on the increase. Every practitioner as well as every intern should certainly have a copy of this *Hand Book*. Price $3.00.

A little book that is written after the manner of a series of brief personal talks is Dr. J. F. Montague's *How to Conquer Constipation*. This little book, though highly recommendable for the laity, is a timely investment—only an hour or two for the time it takes to read it, and the small sum of $1.50—for the doctor, who is inclined to pass over constipation lightly. Dr. Montague is editor-in-chief of HEALTH DIGEST and has brought together in a delightfully conversational style such a mumber of authoritative facts concerning this prevalent ailment that every doctor will be grateful for this eye-opening discourse. Furthermore. the little book will be a ready substitute for prescriptions and lengthy office consultations, for a multitude of sins can be traced to persistent neglect and abuse of the "long-suffering colon."

Dr. Montague's book is divided into two parts: The first is in answer to the patient's questions; the second includes the author's suggestions to sane and sensible relief of constipation and acceptance of Nature's provision for health.

Price $.150; published by C. V. Mosby.

Behind the Syphilis Campaign, Pamphlet No. 24, came to our desk complimentary, from the Public Affairs Committee. It is brimful of information that every doctor should know and the laity as well. It is remarkable how much information has been condensed into this little pamphlet of thirty pages. It is written by Philip S. Broughton. In this little book syphilis is compared with other common diseases as the cause of death. The symptoms of the diseases are discussed briefly, the different stages, the number of new cases being treated in the United States each year, the money cost, the number of premature deaths, the number of babies born with the disease, the number of stillborn, how to treat syphilis, a discussion of its cure and control and how to make the diagnosis and much other important information. This wonderful little book may be had for only ten cents, the twenty-four that have already been published for ten cents each, and also the ones to follow. Write to Public Affairs Committee, Incorporated, 8 W. 40th St., New York, N. Y.

A "Tentative Edition of Diagnostic Standards," for tuberculosis of the lungs and related lymph nodes, has just been issued by the National Tuberculosis Association, and copies are being distributed free by Mississippi Tuberculosis Association, Sanatorium, Mississippi, to physicians who ask for them.

Both primary and reinfection tuberculosis are described under the heading, "Pathogenic Development of Pulmonary Tuberculosis."

"It is not always possible on clinical and roentgenological evidence to differentiate primary and reinfection tuberculosis," says the committee. "It is important, however, to recognize the pathogenic phase in which a given lesion presents itself, since such knowledge is, within strict limitations, the safest available prognostic criterion."

The committee deals with the clinical course of tuberculosis correlated with pathological conceptions. It continues: "The early pulmonary infiltration, the most common early lesion of reinfection, and the precursor of most of the chronic and fatal tuberculosis in adults may appear at any age, but most frequently between eighteen and thirty or thirty-five (in Negroes, a few years earlier). The onset may be symptomless, devoid of abnormal physical signs, and denoted only by the appearance in the roentgenogram of a soft mottled or cloudy patch. Symptoms, when present, are constitutional—mainly fatigue, loss of energy and a small loss of weight; when more severe, they suggest grippe and the lesion may resemble grippal pneumonia."

Failure to find tubercle bacilli in the sputum does not rule out cavity, the report states. Excavation usually is the beginning of progressive pulmonary tuberculosis and prevention or closure of the cavity is the most important single feature of clinical recovery. Otherwise, contamination of other parts is inevitable.

The tuberculin test, x-ray evidence, the history of exposure, symptoms and clinical manifestations, physical signs and laboratory methods are included under the section, "Diagnosis of Tuberculosis." Constitutional and local symptoms are explained in detail. The extent of pulmonary lesions is explained in a descriptive summary, as are observations bearing on cases considered arrested, quiescent, etc.

A form for the description and classification of common thoracic lesions is included in the pamphlet. There are no important changes from former diagnostic standards in the sections on location and extent of lesions.

"An ideal nationwide program for detecting active and potential human sources of contagion with a reasonable degree of promptness and before they have infected many of their associates requires repeated application of tuberculin tests to the entire population, followed by periodic clinical, roentgenologic and laboratory examinations of each infected patient," the committee says.

The National Tuberculosis Association offers the pamphlet tentatively "in order that it may be tried out by clinicians and public health administrators." It welcomes comments from both specialist and general practitioner.

Dr. Walton, professor of pharmocology, University of Mississippi, in choosing his subject, departed from the commonly expected dissertation on a well-known or newly-introduced drug, for an intensely enlightening presentation of a drug whose beginnings are submerged in earliest antiquity. In his book, *Marihuana*, America's New Drug Problem, Dr. Walton states in the preface, "The marihuana drug habit has recently become established in this country and, accordingly, has created the need for a comprehensive source of information on the subject." In the foreword written by Dr. E. M. K. Geiling, professor of pharmacology, University of Chicago, he says, "Of the group of narcotics notorious for their use and abuse, hashish is one of the most prominent. The gathering together of available data on this narcotic is particularly timely. This drug which already has a long and dishonorable history now is again engaging attention as the result of an increasing addiction to its use in modern, civilized countries. Particularly disturbing is the fact that the victims comprise, for the most part, members of the younger generation." Because the subject is of vital interest to lay groups as well as to the medical profession, scientific knowledge is necessary for effective action. And Dr. Walton presents his material in just such a manner to achieve public consciousness of the problem.

A history of the hashish vice, its distribution throughout the world, and its present status in the United States is followed by botanical descriptions of the hemp plant and how used. Excerpts taken from literature describe hashish experience. Acute and chronic effects of its use are cited. Therapeutic, chemical and pharmacutical considerations of the drug are startlingly enlightening, followed by a long system of names applied to the plants and the drug.

After reading this book no intelligent person can fail to view the problem with serious interest.

Published by J. B. Lippincott Company, Philadelphia. Price $3.00.

Dr. Bradley Remembers, by Francis Brett Young; Reynal and Hitchcock, publishers. Price $2.75.

Old Doctor Bradler had practiced medicine for fifty years and on the last night in his surgery he muses over his experiences. The past comes vividly alive. Francis Brett Young writes of the career of this English village doctor so graphically that his story becomes biography and not fiction.

From a childhood warped by an unusual father and an apprenticeship under the mysterious Dr. Mortimore the author carries the reader with Dr. Bradley through student days at North Bromwich. Into a medical world of dispute and controversy caused by Lister and Pasteur Dr. Bradley takes his place. He never becomes famous. No honors come his way. But in a life devoted to his humble patients he finds happiness in service to them. Sorrows come to him. Innocent he causes his wife's death. Futile are his efforts to lead his only son in his pathway. Here is a discerning portrait of a general practitioner.

Mr. Young writes moving and understandingly, but never thrillingly.

Dr. Bradley Remembers should prove of interest to the general public as well as to members of the medical profession.

TENNESSEE EASTMAN CORPORATION

T. M. Dye, M.D., Secretary
Mississippi State Medical Ass'n.
Clarksdale, Miss.

Dear Dr. Dye:

As perhaps you know, there is being planned a Southern Safety Conference to be held in Jackson, Miss., on February 16 and 17. Dr. J. R. Garner, of Atlanta, is to speak the afternoon of the 17th, and a dinner meeting for physicians is being planned for that night. We are trying to get Dr. Victor G. Heiser, who wrote **The American Doctor's Odessey** and who is now Research Director of the National Association of Manufacturers, as speaker for the dinner meeting.

As you well know, industry is developing in and is moving South. The men who are interested in the safety of the worker have planned and worked hard for this Conference, but safety to most manufacturers and to the general lay public means the avoidance of injuries. That attitude is laudable, but I submit that a man is just as dead if he dies of typhoid fever, pneumonia, or any other disease, as he would be should he receive a fatal injury in industry. Due to our Workmen's Compensation laws a large amount of emphasis has been placed upon "don't get hurt." I think it is the job of medical men everywhere—and as this Conference is being held in the South, it is our job in the South—to place just as much emphasis on the phrase, "don't get sick."

The average lost time from industrial injury is about one-half day per employee per year, and the lost time from illness in industry is from seven to fifteen days per employee per year.

We can only have a small part in this two-day Conference as all sessions will be general, but I thought you would want to know regarding plans for the meeting. Would it be possible for you to make an announcement of this meeting in your State Association Journal? Every member of the American Association of Industrial Physicians and Surgeons will be invited by Mr. C. H. Harper, Program Committee Chairman, and I am sending a personal letter to each one urging that he attend. Mr. Harper is also urging the various industries to send to the meeting the physicians who do their work.

Very truly yours,,

C. F. N. Schram, M.D.,

Medical Director

"So many Gods—so many creeds,
So many ways that wind and wind;
When all on earth this old world needs
Is just the art of being KIND."

Reading serves for delight, for ornament, for ability. The crafty condemn it; the simple admire it; the wise use it.—Francis Bacon.

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MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

Amebiasis*

JOHN G. ARCHER, M.S., M.D., F.A.C.P.†
GREENVILLE, MISS.

It was not until the epidemic of amebic dysentery in Chicago during the World's Fair in 1933, that amebiasis was heralded throughout the United States. During that epidemic 800 cases and 40 deaths occurred. Since that time it has become known that this disease entity is not strictly a disease of the tropics and subtropics but is encountered in every state in the Union.

Its distribution is not restricted by climate but by the efficiency of sanitation and especially by shipment of vegetables not grown under strict precautions. The more acute the symptoms the less is the risk of transmission. The chronic cyst passer is reponsible for the dissemination of the infection.

Two main channels of distribution are food and water. Food may be directly infected by polluted water, by the kind of fertilizer used and by contamination if those who handle foods, harbor the parasite. Although the law in the United States prohibits fertilization with human excreta there are instances where this has undoubtedly been done.

It is a known fact that the cysts of Endamoeba histolytica under favorable conditions of temperature and moisture may remain viable in the feces from nine days to as long as three weeks after they are passed.

Kafoid, Kornhauser and Plate reported from some experiments made by them that one individual with only a moderate infection passed from 330,000 to 45,000,000 cysts per day, the average for 26 days being 14,520,000 per day.

From this it is easy to understand how and why amebiasis is widely distributed throughout the United States and yet though so widely distributed it would be interesting to know what per cent of the infected individuals actually contracted the disease in the South and then acted as carriers for their Northern brethren.

Quoting Craig, "The life history of Endameba histolytica is very simple, consisting of a motile or trophozoite stage, a pre-cyctic stage and a cystic stage of development. The cysts of the parasite are the infective stage as the motile trophozoites cannot pass through a normal stomach due to the acidity of the gastric secretion which destroys them. When the cysts of the ameba are swallowed in contaminated food or drink they pass through the stomach unaltered and through the entire small intestine in most instances, but on reaching the large intestine the cyst wall, which has apparently been softened by the intestinal secretions becomes permeable and a four nucleated ameba emerges from each cyst which afterwards divides into eight young amebae. The encystment occurs usually in the ileo-cecal region but may occur in the lower portion of the ileum or in the appendix. After the young amebae are developed some of these penetrate the mucous membrane of the intestine by virtue of a cytolytic substance which they excrete and by their active motility and multiply as motile or trophozoite forms in the tissue. Others do not penetrate the bowel but after living in the lumen of the intestine for a while undergo encystment, the cysts being voided in the feces of the host. If such feces contaminate food or drink, the cysts are swallowed and the cycle of development already described is repeated."

Many authorities tell us that from 8 to 10 per cent of the population harbor ameba and are known to be carriers.

In 1932, one year previous to the Chicago epidemic, at the Mississippi State Medical Meeting I presented a paper titled "The Increasing Incidence of Amebic Dysentery as a Warning for More Thorough Study of Diarrheas." In this paper I attempted to point out that in our clinic we had observed a definite increase in amebiasis in the ten-year period of 1922 to 1932. We have been paying more attention to the examination of stools since 1922, in fact, it has become almost a routine procedure. During 1936, 1230 stool examinations were made in our clinic, 157 of which were positive for ameba or 12.7 per cent positives. In 1937, 1591 stool examinations were made, 222 of which were found to be positive for ameba or 13.9 per cent positives.

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*Read before the Delta Medical Society, Rosedale, April 13, 1938.

†From the Medical Department, Gamble Bros. & Montgomery, Greenville, Miss.

Throughout the State of Mississippi during 1935 there were 848 cases of amebiasis reported, 219 of which were negroes and 629 were white. In 1936, 834 cases were reported, 212 were negroes and 622 were white.

We find that the symptoms of amebiasis are quite bizarre. The symptoms vary so greatly that one is reminded of what Sir Wm. Osler taught in regard to syphilis—his dictum as you know was—know syphilis and you know medicine. With amebiasis we have found that so many symptoms may be caused by this disease that we are rather inclined to believe that almost any symptom can be produced by amebiasis.

The reporting of a few cases should prove of interest and will tend to emphasize this point that I am attempting to convey in regard to symptoms.

The first case is that of a young man, 26 years of age who had been treated for sore throat for one solid year. There was no local inflammation of his throat but examination of the nasal mucous membrane suggested a gastro-intestinal trouble. Examination of his stools showed Endomoeba histolytica. After four days of specific treatment for the amebiasis his throat symptoms cleared up entirely.

The second case I wish to bring to your attention is that of a middle aged man complaining of eye strain and weakness of both eyes, with vague pains back of his right eye and in the temporal region. His eyes were refracted and a simple hyperopic astigmatism was found, and glasses prescribed which corrected this. The patient returned a week later, said the glasses were satisfactory but that he continued to have the same temporal symptoms. A general physical examination was then made and was entirely negative, but examination of his stools was positive for Endamoeba histolytica. After proper treatment for the amebiasis his eye symptoms cleared up.

The third case of a man 34 years of age, who was diagnosed appendicitis, had generalized abdominal pain, a slight diarrhea, and temperature 103. Examination of his stools showed many active Endamoebae histolytica and under treatment he recovered without an operation.

Another case is interesting due to the fact that two conditions existed. This patient was forty-seven years of age, a female whose chief complaint was painful urination. She stated however, that she had not been well for a month. Was first taken sick with a severe diarrhea, passed blood and mucus and suffered with a great deal of gas. This condition lasted about a week and following this she stated she had been constipated. The present illness that she was complaining of was frequent and painful urination. Her physical examination was essentially negative but her stools were positive for ameba and a culture of her urine showed colon bacilli. After the proper handling of both conditions she made a complete recovery.

I wish my time permitted me to report other interesting cases; however, permit me to say that a great many of these individuals with any one of the various stages of amebiasis complain of headache, dizziness, weakness, diarrhea, indigestion nervousness, constipation and frequently of constipation alternating with diarrhea.

The symptoms of chronic amebiasis are so varied and non-characteristic that one wonders if many patients are diagnosed as neurotics or as having nervous indigestion, when as a matter of fact they are actually suffering from an amebic infestation. Surely after a thorough physical and x-ray examination of patients in whom there is any doubt as to diagnosis several stool examinations should be made at least to rule out the possibility of amebiasis. Cases of colitis, chronic ulcerative colitis, chronic mucous colitis and dysentery fall into the suspicious group of possible amebic infection until it has been definitely proved that the stools are negative for ameba. The diagnosis of bacillary dysentery should not be confused with amebic dysentery.

It is most important that the examination of the stools be made under the most favorable conditions.

Just recently I had a patient in my office from South America who stated that while down there she had an attack of diarrhea—not severe enough to put her to bed but it made her most uncomfortable to say the least. She was instructed to send a stool for examination which she did and on which she got a negative report. On further questioning her she stated that she had sent the specimen an hour or so after she had passed the stool. When she came to my office she was still having vague abdominal symptoms and on examination of her stools it was found she had ameba. It is little wonder that the first examination of her stools was negative for ameba. As you know the stools must be examined immediately while they are at body temperature, and on a warm stage. The only satisfactory method is to have the patient take a dose of salts and collect the second and third stool while the patient is at the laboratory so that the stool can be examined immediately while there is plenty of moisture and while it is at body temperature. The examination of a single stool is not conclusive proof of a negative, frequent stool examinations should be made on several days if there is any suspicion whatever of amebiasis or if there is any doubt as to the diagnosis of the case. May it further be said that stools should not be examined for ameba except by those thoroughly trained for this particular line of work. There are some cases that ameba are more readily found in from proctoscopic smears taken directly from the amebic ulcers, so that this form of examination should not be neglected by any means.

We have had several cases operated upon whose stools were persistently positive for ameba and who showed physical signs of chronic appendicitis. On examination of the appendices after operation amebae were found in the lumina and the patient's stools subsequently became negative. We have also had two cases in which amebae were found in the gallbladder at operation.

Lynch, in speaking of complications of intestinal amebiasis, states that associated bacterial infection in acute and probably in chronic amebic colitis is not infrequent. In such incidental infection streptococci and the colon bacillus play important roles.

He further states "that amebic abscess of the liver is a natural result of amebic colitis. Amebic abscess of the lung is usually the result of penetration of the diaphragm and base of the right lung from amebic abscess of the liver, while amebic abscess of the brain, testicle, or other areas are uncommon occurrences from blood-borne dessemination. He says that the two complicating events of direct relation to the intestinal invasion are infection of the vermiform appendix and amebic granuloma of the colon. This latter may be confused with carcinoma or with a localized syphilitic or chronic tuberculous lesion and may even be productive of intestinal occlusion or obstruction."

Reed and Anderson have reported four cases of amebiasis in which carcinoma of the colon followed and accompanied the amebic infection. We have had two similar cases. Reed and Anderson noted that the coincident sites of election and overlapping of symptoms often made the differential diagnosis difficult and in at least two ways the amebic lesions institute changes leading to cancer, first by chronic irritation and second by the production of benign adenomas and polyps which easily become cancerous.

Amebic granuloma of the rectum is easily mistaken for carcinoma of the rectum. I recall one case of amebic granuloma of the rectum in our clinic that had been diagnosed carcinoma of the rectum. The stools, however, were positive for Endameba histolytica. After anti-amebic treatment the mass in the rectum disappeared entirely. On the first examination of the rectum of this patient the mass was quite typical of carcinoma, it encircled the rectum, bled easily, and was quite painful to the touch. It was most gratifying at the end of four weeks to find that the mass has entirely disappeared and there has been absolutely no recurrence. Repeated examinations have been made to make sure that we were not dealing with an amebic infection and a coincident carcinoma.

I have had patients to state that they had been told that an amebic carrier suffered in no way from the infection. I cannot agree with this statement, for like Craig, I believe that there is no such thing as a healthy carrier of Endameba histolytica. Amebae, as you know, are tissue parasites and cause some destruction of tissue though the host's resistance is strong enough to prevent the onset of actual dysentery.

To summarize: I have brought to your attention that amebiasis is widely distributed throughout the United States, that the distribution is by several means, and that the symptoms are quite bizarre. I have reported several unusual cases and have tried to emphasize the importance of proper stool examinations. I have mentioned several conditions in which a differential diagnosis was extremely important and have related some of the complications met with in amebiasis. I have not attempted to touch on the treatment as the scope of this paper does not permit me to do so.

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Diagnosis and Treatment of Urinary Infections*

CHESTER D. ALLEN, M.D.
MEMPHIS, TENN.

Allowed to choose my subject, "The Diagnosis and Treatment of Urinary Infections," seemed to offer the most interest to both specialists and those engaged in general practice.

The limited time does not permit a review of the voluminous literature on this subject. You are all more or less familiar with many of the excellent articles which have appeared from time to time. Perhaps the personal experience of one engaged in the diagnosis and treatment of urinary infections would be interesting, the more so if some of the difficulties are included.

The proposed discussion must necessarily exclude urogenital tuberculosis and gonorrheal infections as either of these alone would require more time than is available.

The symptoms of acute urinary infection are well known to all of us. Chills and fever, nausea and vomiting, pain and soreness in the costovertebral angles, the urgency, frequency and frequently dysuria are quickly noted. Microscopic examination of the urinary sediment with the finding of pus confirms the diagnosis.

There have been no notable advances recently in the treatment of the acute form of infection. The forcing of fluids by mouth or intravenously and the administration of the alkaline diuretics is still the best treatment and can be expected to afford prompt relief. Urinary antiseptics or chemo therapeutic drugs are not well tolerated at this time. About 70% of these acute cases will progress to a complete clinical cure without further medication. The remaining thirty per cent do not completely recover, although the acute symptoms subside, the infection persists and the disease passes into a chronic state. This state may exist for years without any acute exacerbations but with slowly progressive changes in one or more portions of the urinary system.

Since it is obviously impossible to recognize the potentially chronic cases during the acute attack, wisdom urges the identification of the causative organism or organisms during the acute stage. The first step in this direction is the study of the stained smear of the urinary sediment. Technically, this is very simple. After examining the wet urinary sediment for pus the slide is allowed to dry. The residue is then fixed by pouring a little ordinary bathing alcohol over the slide. One may then proceed with staining. Loeffler's methylene blue is perhaps the simplest and easiest although I prefer the gram stain. (Fig. 1) (Fig. 1A). Careful study of the slide will enable one to identify the staphylococci, streptococci, and count the different varieties of bacilli although you cannot say positively the family to which they

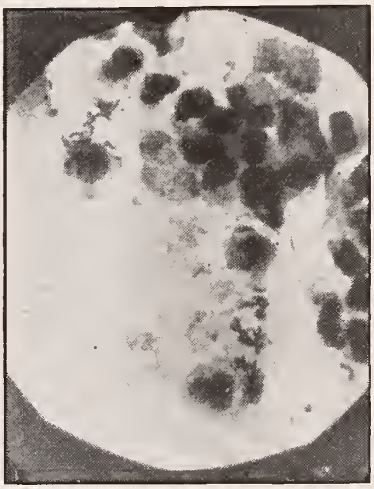

Fig. I. Photomicrograph of stained smear of urinary sediment of Mrs. B. Not bacilli.

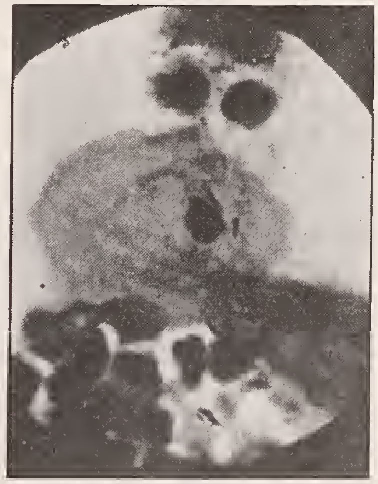

Fig. I-A. Photomicrograph of another field of same side as Fig. I. Note staphlococci.

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*Read before the East Mississippi Medical Society, Meridian, Miss., June 23, 1938.

belong. This procedure is really important, first because it indicates in a general way future chemotherapeutic treatment and secondly it serves as a rough check on the laboratory's urine culture report. Not uncommonly the laboratory will lose one or more organisms on culture. This loss is not always due to carelessness but may be due to the fact that one organism outgrows the others in the media used. The slow-growing organism may be the one responsible for the symptoms. It is a known fact for instance that the colon group will frequently outgrow or overgrow staphylococci. The following case history illustrates this point:

Mrs. J. P. B., age 62, quite obese, was referred because of hematuria one week previously. The bleeding lasted for two hours. The patient has been generally uncomfortable and felt quite ill ever since. Nocturia for past week has been 5 to 6. As long as she can remember there have been attacks of urgency and frequently with bladder discomfort. Lately these have been worse. General physical examination was negative except for vague discomfort on palpation in both costovertebral angles, slightly more marked on the left. Cystoscopy revealed a chronic generalized inflammation of the bladder mucosa, more marked around the left ureteral opening. Urinalysis (catheterized specimen): albumin 2-plus; sugar negative; WBC 4-plus; RBC 6 to 8. Total white count 7,750; polys. 64%. Temperature 98; pulse 82; hemoglobin (Sahli) 69.6%; total red cells 3.7 million. Right pyelogram normal, left pelvis slightly deformed. Urine from each kidney normal but on culture Escherichia coli found. No stained smears of the urinary sediment reported. The patient became progressively worse with symptoms pointing to left renal involvement. Two days after cystoscopy the left kidney was explored. The kidney was found studded with multiple abscesses (Fig. 2). Nephrectomy was done. Convalescence was uneventful. Culture from the abscesses was reported E. coli. Section of the removed kidney (Fig. 3) revealed that large amounts of fat had been deposited under the pelvic mucosa indicating long continued pelvic infection. Scrapings of the abscesses in the cortex showed in addition to bacilli present there were also staphyloccocci. Stained smears of the urinary sediment made after the operation also showed gram positive cocci to be present, yet on culture these cocci had been completely lost and only Escherichia coli reported. To me, it seems quite likely that the cocci produced the abscesses and the bacilli were secondary (Fig. 3A).

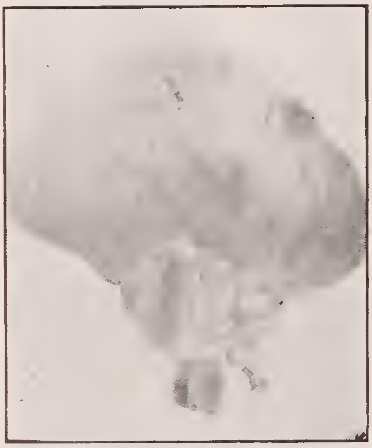

Fig. II. Left kidney removed from Mrs. B. Note multiple abscesses in cortex.

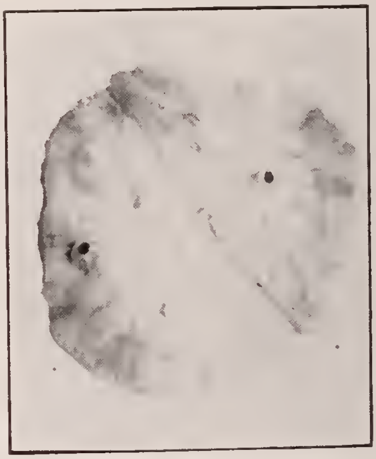

Fig. III. The bisected kidney of Fig. II. Note abscesses in cortex. Also note subpelvic deposition of fat.

Ordinarily where a mixed infection of cocci and bacilli is present the wise policy is to treat the coccal infection first. In those cases where a mixed infection has been present but the coccal element unrecognized treatment by mandelic acid has intensified the symptoms and made the patient quite ill. The following case is typical of this.

Mrs. W. T., age 47, requested examination because while on a recent automobile trip to Florida she had suffered from a severe attack of urgency, frequency and dysuria. The vesical tenesmus was so great that the patient thought she had a stone. She had treated herself with water, citrocarbonate and hot seitz baths. At the time she presented herself she was symptom free. The general physical examination was negative. No renal soreness found. Urinalysis (catheterized specimen) alb. faint trace; microscopically 3-plus WBC in clumps. Occasional RBC. pH 5. 2. For some unknown reason a stained smear of the urinary sediment was not made. Strongly urging cystoscopic study, it was not until two months later that the patient was persuaded to enter the hospital for examination. Cystoscopy revealed a normal bladder. Pyelograms were normal. Urine from left kidney was sterile, that from the right grew Escherichia coli. Following cystoscopy the patient developed an acute pyelitis which subsided under intravenous fluids and methenamine. When the patient became comfortable mandelic acid therapy was instituted to combat the E. coli infection. Upon this medication her symptoms rapidly recurred. Blood, albumen and casts appeared in the urine. A stained smear of the urinary sediment at this time showed streptococci to be present but no bacilli were found. The mandelic acid was discontinued and sulfanilamide therapy instituted. The patient was comfortable in twenty-four hours and the urine sterile after three courses of sulfanilamide therapy. In reviewing this case it seems quite likely that streptococci were probably the cause of this patient's disease and not the Escherichia coli. A stained smear at the first examination would have indicated the correct medication.

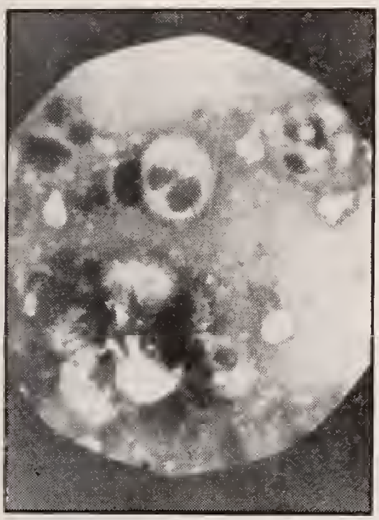

Fig. III-A. Photomicrograph of scrapings from abscesses in Mrs. B's kidney. Note staphlococci.

When urinary infections do not promptly subside the possibility of obstructive pathology being present should be borne in mind and a complete urological study made. Stones, strictures, tumors, in fact any factor which interferes with urinary drainage, will render it well-nigh impossible to obtain a sterile urine.

There are also a group of cases where the infection has been present so long or the damage inflicted so great that complete repair or sterilization will be impossible. Attention is invited to subpelvic disposition of fat in the first case. Such changes indicate long continued pelvic infection (Fig. 3).

The amount of repair which may occur is at times truly astonishing so that one is frequently uncertain as to the best course to be followed. In the case about to be presented treatment has been continued for nearly three years with an almost normal left kidney as the unexpected result.

M. J. C., white male, age 50, was first seen eight years ago. At that time he had complete retention of urine from an impassable stricture of the urethra at the bulb. Due to his extremely poor physical condition relief was given by suprapubic cystostomy, followed sometime later by external urethrotomy. He paid no heed to the instructions to have sounds passed at regular intervals so five years later (1935) he was again admitted with complete retention. On this occasion his condition was such that he was relieved by external urethro-

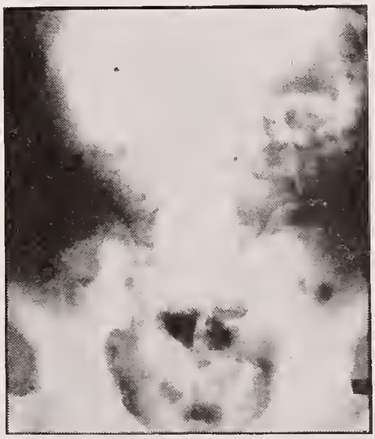

Fig. IV. K. U. S. showing large stone in lower portion of left ureter.

tomy. Following recovery urological study revealed the left ureter obstructed at its lower end by a large calculus over one inch long and about one-half an inch in diameter (Fig. 4). The stone was successfully removed by extraperitoneal uretero-lithotomy. A left pyelogram obtained after removal (Fig. 5) showed a greatly dilated and redundant left ureter and a definite hydronephrosis. The urine has remained hazy with much pus and myriads of bacteria (Fig. 6). These were cocci, both staphylococci and streptococci and many different kinds of bacteria. The hospital culture report, however, lost all but two, Staphylococcus aureus and Escherichia coli. In addition there was a coincident severe infection of the prostate and seminal vesicles with the same bacteria. The treatment has consisted of dilation of the uretero-vesical portion of the left ureter by the passage of a No. 15 bulb on frequent occasions; systematic prostatic massage followed by urethral and bladder irrigations. In addition the urinary infection has been combatted with the ketogenic diet, intravenous injections of neoarsphenamine, 0.3 gm. every five days, for six doses, several courses of sulfanilamine, forty grains daily for six days, and mandelic acid therapy. Difficulty has been experienced in securing an acid bladder urine but the kidney urine is acid on both sides. A recent complete cystoscopic study reveals a normal left kidney (Fig. 7). The prostatic smear shows a large amount of pus present even after all this treatment. Urine culture grew Escherichia coli and non-hemolytic streptococci.

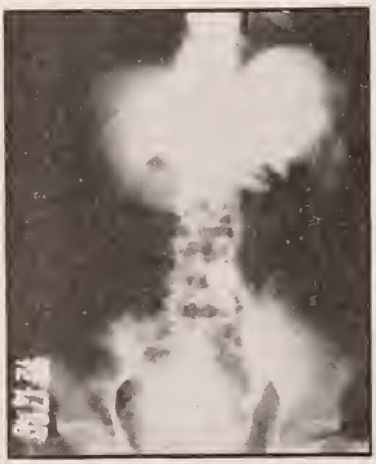

Fig. V. Left pyelo ureterogram made after removal of stone in Fig. IV.

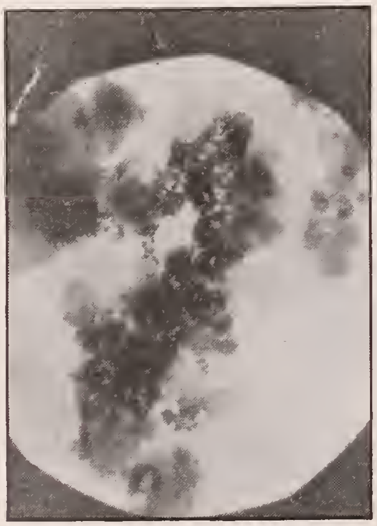

Fig VI. Photomicrograph of stained urinary sediment in same case as Fig. IV.

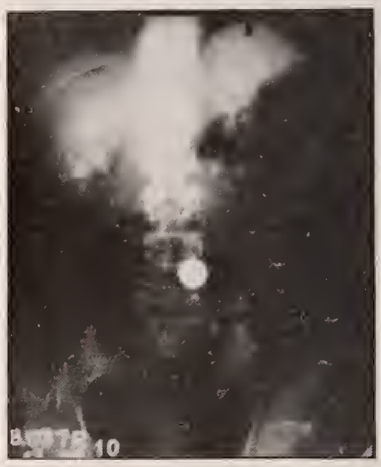

Fig VII. Intravenous pyelogram made three years after Fig. V. Note normal left kidney.

Sometimes when a stone has been present in a kidney for several years an additional trauma either activates a latent infection or leads to the introduction of infection. Such cases are frequently fulminating especially when the causative organism belongs to the coccal group. Prompt surgical interference is necessary not only to save the kidney but also the patient's life. Here an early study of the stained smear of the urinary sediment acquaints the physician with the type of infection present and enables him to form a sound judgment of the hazard. The following is such a case.

Mrs. G. R., white, age 29, three weeks postpartum, was taken suddenly ill with severe right renal pain, chills and fever accompanied by nausea and vomiting. Temperature, 102½; pulse 108. Total white count, 8,400, polys per cent. Urinalysis (catherterized specimen): albumin, heavy trace; acetone 15 per H. P. F. Stained smear of the sediment showed a gram positive coccus and urine culture yielded staphylococcus aureus. KUB showed a rather large circular stone in the right renal pelvis (Fig. 8).

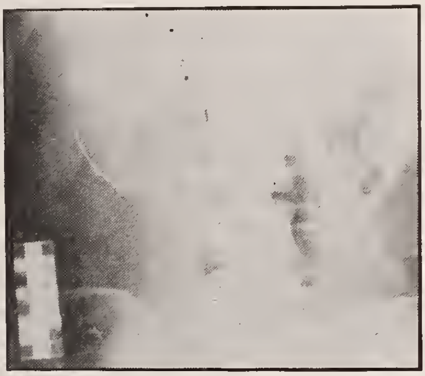

Fig. VIII. K. U. B. showing catheter in right ureter and stone in right pelvis. (Retouched photograph)

The right kidney was promptly exposed. A stone three-eights of an inch in diameter was removed from the right pelvis. In addition, there was a large cortical abscess on the anterior surface of the kidney near the center. This abscess was freely incised, free drainage was provided and the wound closed. Culture from the abscess yielded Staphylococcus aureus. The patient's convalescence was satisfactory. As soon as the patient's condition permitted she was given 0.3 gm. neoarsphenamine intravenously every five days for six doses. The patient's urine was sterile and the right pyelogram normal (Fig. 9).

Modern chemotherapy has made and will continue to make rapid advances in the various types of infections. Urology has made prompt use of this new knowledge. For years those unfortunate victims of chronic urinary infection were treated by repeated lavage of the renal pelvis with various medicines, usually one per cent silver nitrate. Methenamine was usually administered by mouth ad infinitum. The best results consisted of a small percentage of cures. The majority of the patients stopped treatment or their money gave out. The industry with which lavage of the renal pelvis was carried out in some instances is almost unbelievable. I have personal knowledge of two patients who were subjected to cystoscopy with lavage of both renal pelves three times a week for over two months. I have also contacted two individuals who proudly boasted that they had had this treatment 108 and 115 times respectively. Sadly, I must admit that all still suffered from their chronic urinary infection.

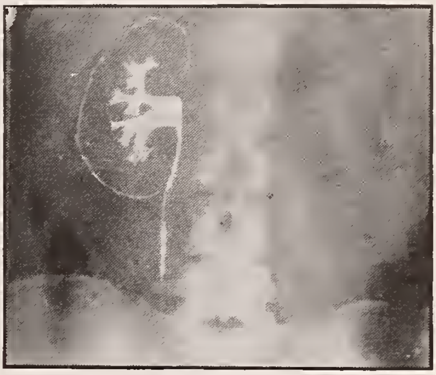

Fig. IX. Intravenous pyelogram three month post operative. (Retouched photograph)

I would not belittle the use of methenamine or urotropin for it is a most useful drug. To me it is valuable to bridge the gap between the acute attack and the stage where the patient can tolerate the chemotherapeutic drugs. Some physicians use these latter drugs in the acute attack of urinary infection when the patient has chills, fever, nausea, etc., but it seems to me that a smoother convalescence is secured by first the use of alkaline diuretics until the distressing symptoms subside, then methenamine and acid sodium phosphate while the patient is recuperating and, finally, the eradication of the infection by the use of the chemotherapeutic drugs.

The first great advance in the treatment of urinary infections was made when the ketogenic diet was employed to produce ketonuria. This method is still excellent but technically is so cumbersome that hospitalization is almost necessary for dietetic control.

The substitution of mandelic acid therapy for the ketogenic diet simplified the procedure greatly and made office and home treatment very practical. Mandelic acid has given me excellent results in urinary infections of Escherichia coli but in other types the benefit has been so slight that I use other drugs. For the average adult the equivalent of twelve grams of the drug should be given daily. To secure sufficient concentration of mandelic acid in the urine all fluids must be limited to less than three pints in twenty-four hours. The pH of the urine must be less than 5.3. After twenty-four hours of medication the hydrogen ion concentration of the urine must be tested daily until the physician is satisfied it is less than 5.3. Once below this point further testing is not so important as it will usually remain low. The test is simple and is easily made by means of test papers supplied when the drug is purchased. If the required acidity does not promptly develop, enteric coated pills of ammonium chloride or ammonium nitrate may be used. Mandelic acid therapy should be continued for ten days after which urine should be cultured.

When the infecting organism has the power of splitting urea, thereby liberating ammonia, it may be impossible to secure an acid urine. The only contraindication to the employment of mandelic acid is renal insufficiency. The efficacy of this drug depends on the power of the kidneys to excrete acid urine; when badly damaged this they cannot do.

Sulfanilamide is the wonder drug especially in the various coccal infections. The dosage recommended varies greatly. Personally, I have found that ten grains four times daily for six days has yielded uniformly good results in adults. Most patients complain of one or more untoward symptoms such as dizziness, headache, pain in various parts of body, but as these promptly disappear on discontinuance of the drug, they need cause little concern. Three days after the completion of the treatment the urinary sediment should be examined for bacteria. If present, the treatment should be repeated; if none are found the urine should be cultured. Treatment should be repeated until the urine is sterile. The pH of the urine is of no moment in the use of this drug. sulfanilamide therapy, neoarsphenamine, 0.3 gm. intravenously every five days, should be tried. Unless there is marked improvement after three injections the drug may be discontinued as any subsequent improvement is unlikely.

Proteus infections frequently respond promptly to sulfanilamide therapy as does also B. coli aerogenes. Pyoganeus infections are much more resistant. The most benefit in these latter infections is obtained from sun baths or ultraviolet therapy.

No matter what infection may be present and whatever the drug employed every effort should be made to improve the general health of the patient. The possible influence of distant foci of infection should be carefully considered and if not too hazardous eliminated. Apical dental abscesses are frequent feeders to chronic urinary infections.

Be the drug ever so efficient or its employment ever so skillful, unless the patient develops that indefinable something which we choose to call "resistance to infection" the outcome will be unfavorable and the disease uncured or progressive.

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Allergy In Infants and Young Children

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What is allergy? It is increased susceptibility to certain allergens, to which the cells of the body have become sensitized or sensitive to. Allergens are any absorbable substances with which the body comes in contact either by inhalation, ingestion, injection, or contact giving manifestations of hypersensitiveness. Ten per cent of the population of this country suffer from major allergy, and a much larger per cent from minor forms of allergy.

Heredity plays a very strong part in most allergies. One-half to two-thirds of allergies occuring in childhood are inherited. The closer and more complete the inheritance the earlier the symptoms appear. This inheritance is through the germ plasm in the case of the father, but in the mother it may be active or passive transference of the sensitivity through the placenta. In this instance it would have reference to the dietetic and therapeutic measures used by the mother during gestation. The site and nature of the allergy depends upon post-natal injury in the presence of suitable allergens. In acquired allergy the association must be closer and more continuous. If the family history shows both sides of the family to be allergic, the symptoms usually appear before the fifth year, although they may appear earlier or later. By the time the forty-fifth year is reached all of these individuals show some form from the mild to the severe. If the family history shows allergy only on one side the incidence is one-third less. The mother seems to be more prominent in the transference of this hereditary tendency. Three to five per cent have allergy where there is no family history of allergy. Serum allergy appears in about ninety per cent of white children who have received an intravenous injection of therapeutic horse serum. The incidence of serum reaction is the same in all the decades of life, whereas the incidence of inherited allergies increase markedly with the advancing years. This indicates absence of heredity influence in serum allergy. Drug allergy does not seem to be influenced by heredity. Contact allergy has no demonstrable hereditary influence. The infectious and miscellaneous types are not influenced by heredity.

Acquired allergy may occur at any time by over indulgence or intermittent taking of specific allergens. Undigested protein can be absorbed by the gastro-intestinal tract of children that have a G. I. upset. This protein after absorption acts as a foreign substance in the blood and sensitizes the child to an unsplit protein. This explains the not unusual allergic disturbances of nutrition.

Passive allergy, by blood transfusions, may occur. Be careful in the selection of the donor.

Allergic Conditions or Syndromes. Some divide into three main groups: 1. Familial or atopic (foods and pollens). 2. Contact dermatitis. 3. Infectious allergy. I am not going to classify allergies but give a short discussion of each of the main conditions:

1. Asthma, and recurrent bronchitis.
2. Hay fever.
3. Urticaria or nettle rash, eczema, angioneurotic edema, flexural pruritis, purpura, erythema multiforme.
4. Gastro-intestinal allergy, colic, recurrent vomiting, colitis, constipation, etc.
5. Serum allergy, anaphylaxis, serum sickness.
6. Drug allergy, drug sickness, or idiosyncracy.
7. Contact allergy, poison oak, chemicals, orris root, insect bites, etc.
8. Migraine, abdominal symptoms predominating.
9. Infectious, and miscellaneous, T. B., ring worm, athletes foot, baldness, eneuresis, bladder and kidney allergy, epilepsy, physical allergy—heat, cold.

Allergens enter the child's body by

1. Mouth, food, drugs, etc.
2. Subcutaneous, serums, vaccines, drugs.
3. Intravenous, serums, vaccines, drugs.
4. Inhalations, pollens, bacteria, etc.
5. Contact, poison ivy, chemicals, etc.

After the child has absorbed one of the allergens any one or more of the allergies may develop, such as asthma, and eczema in the same patient.

GENERAL OUTLINE OF THE DIAGNOSIS OF ALLERGY

1. Careful history. The clinical symptoms vary with the type of body cells that happen to be sensitive. This accounts for the wide variety of symptoms seen in sensitive children, so consider every angle—onset, duration, prog-

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*Presented before the Delta Medical Society, April 13, 1938.

ress, food relations, likes and dislikes of the child, seasonal, environment, time of day or night, pre-natal, dietetic and therapeutic history of the mother, family history complete.

2. Careful physical examination, paying particular attention to the parts affected (nose, throat, chest, and skin).

3. Laboratory examinations to be made as indicated by the needs of the patient. There are many in regular use.

4. Complete blood, eosinophilia, leucopenic response.

5. Urinalysis.

6. Nose and throat smears, and cultures, offending organisms, autogenous, vaccines, eosinophilia in nasal discharge and sputum.

7. Gastric analysis, hypochlorhydria.

8. X-rays, chest, and sinuses.

9. Basal metabolism rate, hypothyroidism, or other endocrine dyscrasias.

10. Consultation with nose and throat specialist if needed.

11. Dental consultation, focal infections, oral hygiene.

12. Allergen tests, foods, pollens, bacteria, etc.

Most Common Offenders: Milk, egg, wheat, cream, cheese, tomatoes, certain kinds of sweets, strawberries, nuts, chocolate, cocoanut, orange, banana, apple, celery, cabbage, cauliflower, potato, spinach.

The technique of the different tests will not be given.

A. Scratch is more suitable to children, and in the hands of average person. Glycerated extracts are more uniform. Children give more positive reactions than do adults. Scratch tests are simple, free from bacterial contamination, safe, give fewer non-specific irritative reactions, are economical in small practice. Several hundred allergen tests are available. If many positive reactions do not do over thirty tests at one time. Twenty-to-forty-day desensitized period sometimes follows an attack of allergy.

B. Intra-dermal tests are more painful, need more equipment, are dangerous, more sensitive, and apt to be misleading.

C. P. K. reaction or indirect or passive reaction is used in case of necessity, or in extremely nervous patients, or where the tests are necessary before the patient's skin clears up enough to do the tests.

D. Patch test is more sensitive and useful in patients whose symptoms result from external irritants. Use upper chest, back or inner surface of the forearm. Tuberculin test in children. Read in twenty-four hours unless reaction and have to remove sooner.

F. Ophthalmic test is used as pollen sensitivity test, drop dilution.

1 to 10 therapeutic horse serum along with the intradermal dose to test the patient before administering horse serum.

G. Lip test.

H. Nasal test.

I. Rectal instillation test and ingestion test.

J. Leukopenic index.

K. Pressure puncture method.

Like most laboratory tests you cannot rely on these tests entirely but can use the results as a basis to start from. Measure the size of the positive reactions and scale so as to know the various reactions of 1- to 4-plus.

Elimination diets, diary diets, addition diet, and anti-retentional diets are used in the diagnosis as well as the treatment of allergy. Retest patient every 6 to 12 months if very sensitive for best results.

GENERAL OUTLINE OF THE TREATMENT OF ALLERGY

Treatment of all allergic conditions is much the same except in that of the symptoms. It is based upon specific protein sensitivity. Eliminate the causative allergens by removal or avoidance, from diet or environment, ideal theoretically but often very difficult. Foods in denatured forms may be used, oral desensitization, small amounts and gradually increased until tolerance is established. May take several months. Establish tolerance by para-enteral desensitization, injections given intradermally or subcutaneously in gradually increasing doses. Be sure to give test dose first, and in giving the injection pull the plunger of the syringe back to make sure that the tip of the needle is not in a blood vessel. Best results in hay fever by the injection method, 15 or 20 weekly injections. Local and general reactions of the patient govern the dosage. Can use pre-seasonal, perennial, or year-round treatment. Perennial is the one of choice. Histamine desentizations.

SYMPTOMS AND TREATMENT OF THE COMMONER TYPES OF ALLERGY

1. Asthma, recurrent bronchitis.

Asthma in children is not always easily diagnosed, may be confused with bronchopneumonia. The clinical picture is that of bronchitis of the smaller bronchioles coming on with great suddenness.

1. Onset may be sudden or gradual.
2. May or may not be seasonal.
3. Dyspnoea, expiration prolonged with sibilant rales.
4. Cough may be almost constant.
5. Wheezing.
6. Fever, depends on the cause, may be mild or severe.
7. Therapeutic test with epinephrine solution.

ASTHMA AND RECURRENT BRONCHITIS TREATMENT

Divided into the treatment of the acute attack, and the specific and non-specific or both for the arresting of the attacks. Once allergic always allergic.

1. Adrenalin spray with special nebulizer, 1:100 solution.
2. Adrenalin, and ephedrine by other methods, injections, sprays, inhalations, etc. Children should not receive large doses by injection or too often. Results are often disappointing.
3. Neosynephrine.
4. Mustard plasters.
5. Ether and olive oil by rectum, or ether by hypo., 1cc.
6. Emetics.
7. Croup kettles.
8. Cough medicines help if strong enough with some opiate, codeine or papine.
9. Hemotherapy.
10. Morphine and atropine, should be used cautiously because habit forming.
11. Iodides.
12. Injections into bronchi of iodized oils.
13. Suprarenal gland powder orally may help.
14. Oxygen therapy. Histamine desensitizations.
15. Laxatives.
16. Try to maintain diet, and body fluid balance.

SPECIFIC TREATMENT OF ASTHMA

1. Removal of the offenders.
2. Change environment and not climate.
3. Injection treatment.
4. Try to avoid complications, barrel chest, malnutrition, chronic bronchtitis, and bronchiectasis.

Asthma appears during the pre-school period; two-thirds of these cases give positive family history, high incidence of eczema, and urticaria as a forerunner to asthma. The earlier the patient comes to you the better the results. Asthma before 2 years old is usually due to foods, after cyclic and non-seasonal. **Negative dust test means non-specific asthma.**

1. Hay Fever. Not unusual in children, frequently unrecognized, sneezing especially in a. m. and p. m., profuse watery nasal discharge, watery eyes, may or may not have fever, nasal obstruction due to engorgement and edema, mucous membranes usually pale, itching of the nose, onset may be sudden or gradual, cough usually pollen allergy, may be food or both, seasonal when due to pollens but perennial where multiple sensitization, largest number of cases seen during early school years, but first symptoms occur in pre-school period, tonsillectomy and adenoidectomy sometimes make worse, many operations or may be either, smears of nasal discharge show eosinophilia.

2. Hay Fever Treatment. Diagnosis and removal of the cause, remove positive foods as well as pollens during the season, desensitization will usually relieve. Can use many of the methods outlined under general treatment of allergies, and under asthmatic treatment. Hay fever resorts. Treatment may be preseasonal, co-seasonal, or perennial. Preseasonal is the method of choice. Use potent extracts, sufficient number of injections to the threshold of tolerance or optimun protection dose. Some of these patients are unable to develop tolerance.

3. Urticaria or nettle rash, eczema, angioneurotic edema, flexural pruritis, purpura, erythema multiforme, acid protein rash:—not solely due to sensitivity, allergy cause in majority of cases, many types due to specific sensitivity, change in material of baby's under clothes or change from mother's milk to cow's milk may cause; remove most common offenders from mother's diet, or if to cow's milk prolonged boiling may relieve, may use different kinds of non-allergic foods, as sobye, cemac, evaporated milk etc., complete removal of the allergen will result in a loss of sensitivity within 2 years; many will become desensitized without the removal of the allergen. Injection desentization, ointments good for relief but no good as a cure, may use other types of local for applications, also thyroid, parathyroid, calcium, vitamin D, pancreatic extract, histamine desensitizations, etc. Must maintain caloric and metabolic balance, comes in majority of children before the sixth year, very common in the first year, may be due to focal infections, gastro-intestinal toxemia, foods, pollens, endocrine dyscrasias,

hypochlorhydria, or anacidity, menses or menopausal. Onset may be sudden or insidious, may be seasonal, rash and swelling outstanding symptoms, may have nausea and vomiting, diarrhea or constipation, may have fever, symptoms of coryza, headache.

Treatment: Adrenalin, ephedrine, or both, sedatives, laxatives, especial attention is given to the gastro-intestinal tract, removal of the cause will relieve, atropine, suprarenal and other endocrine extracts, soda and other bland baths, alkalines or hydrochloric acid by mouth, theelin, antuitrin S, esterone, etc., calcium sodium thiosulphate, insulin, pancreatic extract, peptone, injection of distilled water, and desensitization by injection treatment, elimination diets. Most common offenders in this group are eggs, shellfish, feathers, sheep wool, cotton seed, orris, kapok, rabbit hair, fish, chocolate, nuts, berries, and condiments, milk, orange, tomato.

4. Gastro-intestinal allergy, colic, recurrent vomiting, colitis, constipation, etc., herpes of the lips, swelling itching, burning of the lips, tongue, mouth, canker sores, loss of appetite, distention, nausea and vomiting, constipation, colitis, abdominal cramps. Symptoms may occur from the mouth to the anus, may stimulate any other gastro-intestinal disturbance, may precede, occur with or follow any of the allergies. Breast fed baby can suffer gastro-intestinal allergy through the mother's diet. Newborn babies that spit up a great deal should be suspected of allergy. Give some form of sedative early and supervise mother's diet so as to try to prevent allergy, pylorospasm, or even pyloric stenosis. Encountered more frequently in children than in adults. As the child passes the age of four years this sensitivity to food decreases, and the sensitivity to inhalants gradually increases, foods are usually but not always the causative factors; many cases of colic in infants are only manifestations of food allergy, true even in the breast fed infant. The leukopenic index is used more in this group than in any of the others. Treatment is similar to the other allergies, remove the cause, and treat the acute symptoms as they arise, elimination diets are very useful in this group.

5. Serum allergy, anaphylaxis, serum sickness. — History of having had serum within three weeks, fever usually high and may or may not be associated with the rash, the reaction comes in the greatest number of cases on the eighth day. Knowing that the child is likely to react we use prophylactic treatment during this eight-day period, by laxatives, ephedrine and amytal, and diet. A precaution that should always be taken before the administering of therapeutic horse serum, or any hypodermic injection either intravenously, subcutaneously, or otherwise, with the possibility of reaction, the patient should have a test dose intradermally, and an ophthalmic test to determine the sensitivity of the patient. If positive reaction, patient must be desensitized before giving the medication. This is done by gradually increasing the intradermal dose until there is no reaction, and the injections given in gradually increasing doses depending on the local and general reactions of the patient. Have epinephrine solution ready to control reaction. A tourniquet or blood pressure apparatus may be used to control the absorption of the serum. Once the patient is desensitized it does not have to be repeated unless there is an interval of more than five days between injections. It is well to test each time to be on the safe side. Always tell your patients that the child has had horse serum so that if in the course of events the child has to have a repeat or one of the other horse serums it will be of help to the one that will have to administer the serum. This includes the other medications that carry any danger of reaction. Be sure to pull the plunger of the syringe back to be sure that the point of the needle is not in a blood vessel. Every precaution should be carried out in the intravenous injections. The immediate reaction that takes place is known as anaphylactic shock, or anaphylaxis, and is severe enough to produce violent symptoms or even death. The allergic group of children requires the injection of these medications the same as do those of the non-allergic group, also the group that has had one injection of horse serum may have to have another later on in life and this group has to be handled properly to get out with the least amount of trouble. Always be very careful with these children, and be sure to obtain a good history of allergy, and of other injections regardless of what they might have been. The rash is usually of the urticaria type, but may be just an angio-neurotic edema. This rash and edema may attack any part of the child's body but usually affects the face, hands, feet. It should be handled in the same manner that the urticaria, and angioneurotic edema cases are.

6. Drug allergy, drug sickness, or idiosyn-

cracy.—History of drugs that the patient has been taking or using. Rash appears usually in a few hours, but may be delayed as long as twenty days. Any drug is capable of giving a rash or reaction, but there are certain ones that are more likely to produce symptoms than others. The more common ones are quinine, bromides, iodides, coal tar, etc. Removal of the offending drug will be all that is necessary to relieve, but if not, treat the symptoms as they occur. Caution the patient about retaking any of the drugs that he is sensitive to.

7. Contact allergy, poison oak. chemicals, orris, insect bites, metals, etc.—The excitants are the leaf, stalk, and root of the various plants, pollens dry and windborne, and chemicals. Some of the offenders are orris, insect bites, ragweed, cosmetics, animal dander, furs, fabrics, urotropin, mercury, lead, arsenic, oil of orange, furniture polish, dyes, soaps, adhesive tape, feathers, etc. The rash and reaction are variable in this group, and the diagnosis is made on the history, character of the rash, season of the year, and by the aid of the patch and intradermal tests. The percentage of children sensitive in this group is high. The patch test is very satisfactory (test solution plus gauze or blotting paper plus cellophane plus dressing, read in twenty - four hours, unless necessary to read sooner, apply to back chest or inner surface of the forearm). If wool or leather wet sample and place and read as above. Contact rash is vesicular and on erythematous base, atopic or seborrheic papular and weeping, lichnified, may be from a scaling to a weeping. Contact on flexor surfaces, on neck, behind ears, seborrheic on scalp near hair line, or in other locations where sebaceous glands are located. The treatment is the avoidance of the allergen which is uually always specific. May have to change occupation, cosmetics, soap, or wear gloves to work. Avoidance may be inconvenient and expensive, especially to the pollen or ivy group. Change in environment and not of climate will be of help. Very good results can be obtained by injection of offender in negative oil. The oil promotes slow absorption, and preserves effectiveness. The injections may be given weekly or oftener if necessary, and can be used prophylactically, and therapeutically. Most of these oil solutions can be obtained on the market or can be made to order for special use. Results have been very helpful.

8. Migraine, allergic headache.—Abdominal symptoms predominate in this group, and may over-shadow the headache, twice as common in women, rarely caused by inhalants, rare in children, do not complain of headache but of dizziness. As they grow older dizziness replaced by headache. Periodic G. I. upsets, may have fever, children who have or have had cyclic vomiting commonly develop migraine, in later years. Cyclic vomiting with family history saturated with allergy means eventually migraine. After twelve years assumes adult type. The treatment, place the patient in a dark room, ice cap to head, saline laxative to clear G. I. tract, analgesic, antipyretics, painodynes, ephedrine and amytal as needed for the comfort of the patient. Apply general allergy therapy to try to remove the cause which is usually food. Elimination diet, ketogenic diet, leucopenic response, pancreatic extracts, peptone, HCL., etc.

9. Infectious, and miscellaneous, T. B. reactions, ringworm, athletes foot, baldness, eneuresis, bladder and kidney allergy, epilepsy, physical allergy (heat and cold reactions), hypertention allergy. Diagnostic reactions to cutaneous, and intra-cutaneous infections, and stimuli. T. B. reactions for diagnostic testing to see if the patient has an active T. B. or is arrested. The patch test is very useful and handy for testing. Dried O. T. more delicate than Von Pirquet, or Mantoux, read the reaction in 48 and 72 hours. Eneuresis or G. U. allergy, those conditions which do not respond to ordinary G. U. treatments, allergy should be thought of. Less than one per cent of the cases of epilepsy come under allergy, baldness may be allergic thru the indirect or direct affect of the endocrines, hypertention allergy relieved by removal of foods causing. Athletes foot, ringworm, etc., which do not yield to special local treatment are often relieved or cured by desensitization injection treatment. This may be carried out with suitable mixtures of extracts of the two major classes of the pathogenic fungi (trichophyton, and monilia). Selection of the proper mixture for the injection treatment depends upon positive intradermal skin tests with trichophytin solution 1:30, and oidiomycin (monilia), 1:100.

Just a few words about elimination diets in the treatment and diagnosis of allergic syndromes (Rowe). The starting point is determined by the positive skin tests. Preliminary suggestions: keep the patient in the best of condition, and spirits, as the improvement may be gradual or discouraging, and many changes may have to be made. Four to six meals daily, diary of meals so that if an attack comes on an accurate check on the diet can be had and the offending foods can be traced, treat constipation with large quantities of liquids every morning, try to avoid enemas and laxatives, remove foci of infections.

Rowe gives four main diets, but it may become necessary to alter to meet the demands of the patient.

1. Milk alone for the test period 2 to 3 quarts a day.

	2	3	4
Cereal	Rice	Corn Tapioca	Rice Rye
Bread	Rice Biscuits	Corn Pone	Rice Rye
Meat or fish	Lamb	Bacon Chicken	Beef
Vegetables	Lettuce Spinach Carrots	Squash Asparagus Peas Artichokes	Tomato Beets String Beans
Fruits, jams, Fruit drinks.	Lemon Pear Peach	Pineapple Apricot Prune	Grapefruit Pear Peach
Miscellaneous	Sugar Olive Oil Salt Gelatin Syrup from Cane flavored with Maple Syrup Olives (unstuffed)	Sugar Mazola Oil Salt Karo	Sugar Wesson Oil Salt Gelatin Syrup Cane flavored with Maple Syrup

1. Milk alone for the test period 2 to 3 quarts a day.

The diets exclude foods that the patient is sensitive or most likely to be sensitive to. Common excitants or allergens are milk, wheat, eggs, apple, banana, orange, celery, cabbage, cauliflower, potato, spinach, cream, cheese, tomato, sweets, certain kinds, strawberries, cocoanut, chocolate. May have to omit or add one food at a time to find the offenders. This elimination method is especially useful in diets of infants whose diet has a known limited number of foods, and is easily supervised. Use diet trial from 3 days to 3 weeks in treating and testing. If milk is excluded for more than a month add calcium to the diet to insure mineral balance. In adding additional foods add every 5 to 7 days if the patient is free of symptoms. Maintain caloric, and metabolic balance governed largely by the weight curve, canned and cooked fruits best, but are low in vitamins and should not be kept up long without the addition of viosterol in a negative vegetable oil. Diet should be soft and non-irritating. Must not over-indulge in one or all foods at any time, eat slowly, chew the food well, and alternate different food groups on different days. Long cooking of foods is always helpful. Fresh foods should be used, those kept under best of conditions will undergo some chemical change.

Treat the allergens in children the same as you would in the adult. As a rule the outlook is brighter. All these examinations and tests mentioned are not necessary for the good treatment of allergies, but go to show what can be done where the usual measures fail.

Mississippi State Medical Association

Leon S. Lippincott, Vicksburg .... Editor
G. S. Bryan, Amory .... Associate Editor
Leslie V. Rush, Meridian .... Associate Editor

Papers and news material for publication should be received not later than the fifth of the month preceding publication.

The editors are not responsible for statements made by any contributor.

Manuscripts and all material for publication should be addressed to the editor, P. O. Drawer 231, Vicksburg, Mississippi.

EDITORIALS

MERRY CHRISTMAS!

God rest ye, little children; let nothing you affright,
For Jesus Christ, your Saviour, was born this happy night;
Along the hills of Galilee the white flocks sleeping lay,
When Christ, the Child of Nazareth, was born on Christmas day.

—D. M. Mulock, Christmas Carol.

WHAT DO YOU THINK?

To be of any value, the official journal of a medical association should express the thoughts of the members. Especially at this time should there be free discussion of the many changes that are coming about in the practice of medicine. The profession of Mississippi cannot preserve the old conditions even if it wished to. It should try to foresee every possibility and be ready with plans to meet anything that may come.

In a military campaign, the tactician makes an "estimate of the situation" and then plans to meet conditions that may arise—for advance, for holding the present position, and even for retreat if that becomes necessary. An effort is made to give consideration to every possible move of the enemy and to make preparations so that there may be no surprise.

For many years now, doctors have been saying that a change is coming; the medical profession should take the leadership or someone else will. It is now necessary to admit that the foreseen change is here whether we like it or not and that the profession is not always taking the leadership.

With a view to inducing the medical tacticians of Mississippi to make an "estimate of the situation" and to prepare plans to meet the present emergency, a number of the members of the Association have been asked to start the discussion by expressing their thoughts on present conditions and what they think should be done. Three have complied this month. Others will follow. Perhaps you will not agree in everything that they say. If so, so much the better. It gives YOU opportunity for argument and that is what is badly needed right now.

From the expressed thoughts of many members of the Association may come the solution for Mississippi medicine. This state has led in many things. Why not in a plan for the medical care of all of the people? Will you not take part in the discussion by expressing your thoughts now?

* * * *

"SOCIALIZED MEDICINE"

For several years a campaign has been carried on in the United States by well meaning but not always well informed individuals to arouse public sentiment in favor of socialized medicine.

Through the press, periodicals and various large organizations of our citizens, a determined effort has been made to influence public opinion in favor of a change in the methods of medical care of the sick.

At first this agitation appeared only as a small cloud on the horizon, incapable of assuming storm proportions. Today the signs of an impending storm that threatens to destroy the private practice of medicine by our profession are very apparent. Organized medicine has failed to realize in the past, that public opinion could be aroused to bring about what is known as socialized medicine in the United States.

We have assumed that our place in the sun was secure, that there was no problem in the care of the sick that would not solve itself. Therefore, action by the organized medicine was not needed. Subsequent events have proved that we were wrong in assuming that there was no problem to be studied and solved.

What has brought about the agitation for a change in the care of the sick? I think we may answer—the increased cost of medical care.

The great development in the Art and Science of Medicine during the past fifty years has made the practice of medicine today a very different procedure from the practice of physicians of an older period.

In order to arrive at a correct diagnosis we must have the aid of the bacteriologist, serologist, roentgenologist and pathologist. Then after the diagnosis is made, hospitalization and nursing care in many cases becomes necessary. The field of medicine has become so extensive that it is impossible for a physician properly to cover the entire field, therefore the aid of a specialist is frequently required in the examination and treatment of the patient. The pharmacist must also be included in the cost of medical care. Drugs, vaccines, serums, etc., add very much to the cost of medical care.

When we sum up the cost of these various services, that scientific medicine requires must be rendered the patient, we find a cost that the patient of ordinary income cannot meet. The large majority of our citizens are in the medium and low income classes. This is especially true during the past eight years, the depression years. The cost of medical care has increased during the past twenty years until today it is out of the reach of that great majority of our population, the middle class. The rich are able to pay for it, the indigent are treated without cost.

This is the problem that organized medicine must solve if we wish to prevent socialized medicine. I believe the solution lies with the county medical societies. There can be no standardized plan made to apply to the entire country or state. Local conditions in each community must govern in the proper solution of the problem.

County medical societies should begin an active study of local medical economic conditions in their respective counties. Plans that have been adopted by various county medical societies in the United States may be obtained from the American Medical Association. These plans will act as a guide, in a general way, in preparing a plan to meet local conditions.

The House of Delegates of the American Medical Association at its recent meeting in Chicago accepted some of the recommendations of the Interdepartmental Committee appointed by the president to study medical care and authorized the appointment of a committee to confer with the Interdepartmental Committee in regard to the solution of this problem. There is an old saying, "We lock the barn door after the horse is out." I am afraid we of the medical profession are beginning to take action after the change in medical practice has become almost an accomplished fact. That there will be legislation by the next congress covering the subject of medical care, is a forgone conclusion. Just how far reaching this legislation may be no one knows. It is the duty of organized medicine to lend a helping hand in framing this legislation and endeavor to prevent radical views from influencing the character of the plan adopted.

During my tenure of office as president of the State Medical Association, I attempted to stimulate interest in the study of medical economics by our county societies. It was my opinion that the trend of public sentiment was becoming more and more aroused in opposition to the increased cost of medical care; that if we, of the medical profession, did not take the lead in solving this problem the public would do it for us, probably in a way not at all to our liking. Apparently this is about to happen. Whether we can stem the tide against us remains to be seen. I am sure we cannot, if we continue to neglect this important subject, medical economics.

Every county medical society in Mississippi, should at its next meeting begin a thorough systematic study of local medical economic conditions in their respective counties.

The time for talk is passed; the watchword from now on should be action.

There is an expressed opinion of the laity in the past that "doctors meet, talk, pass resolutions and each individual doctor as he leaves the meeting decides in his mind that he will follow the resolutions adopted in so for as they do not conflict with his own opinion."

This extreme individualism must give way to concerted action if we would preserve the principles that have governed the medical profession through the ages past. We must realize that we are living in an age in which great changes are taking place in our economic state. Medicine must adapt itself to this changed condition. The adaptation should be made by the medical profession and not the politician.

I can conceive of no greater calamity to our profession than that the blighting hand of the bureaucrat be laid upon it. Both the public and the profession will suffer if the care of the sick is to be controlled by a political bureau.

We must go actively to work to solve the problem of medical care. Concerted action by organized medicine should bring scientific medical care within the reach of all of our citizens.

The problem lies in the hands of our county societies. LET'S HAVE ACTION.—J. W. D. Dicks.

* * * *

Alexander Pope might have been speaking to the medical profession of today when he said,

"Be not the first by whom the new is tried,
Nor yet the last to lay the old aside."

The change in medicine has been referred to in vague terms since the New Deal has been in progress. While the doctors have been engrossed in their practice, a revolution has got underway. Today they are compelled to get themselves out of this dilemma into which they have suddenly been caught, or else have some unsympathetic layman's scheme forced upon them. The doctors will have difficulty agreeing upon any plan because up to the present time they have been allowed to think and act without interference from any power.

In the past the doctors have looked with contempt on any aid offered by the government. All people are forced to contribute to the common fund known as taxes. Taxes are used to educate the citizens, to protect them from criminals, to care for them in hospitals, and even to bury them. Should doctors be in a class to themselves? Should they not be paid for services given to that large group of patients who cannot finance themselves? A competent committee should investigate each family that applies for help to prevent those who can finance themselves from receiving free services. The medical society in each locality should fix the fee which should not be less than the prevailing rate in that locality. Since this is a free country, why should not each person have the privilege of choosing his own doctor?

Socialized medicine seems to be inevitable. Why does not the medical profession formulate some efficient method for giving it to the people instead of waiting for those outside the profession to devise the plan?—Gladys Ratcliff.

* * * *

STATE MEDICINE

The most important question now confronting the medical profession is that of state or socialized medicine. Until recently, our country has lagged far behind many others in social security legislation. From now on the medical profession will be forced to adjust itself to the many new conditions brought about by social legislation. Shall we sit idly by and allow these new conditions to be thrust on us rather than interest ourselves in them and help to guide them into channels more conducive to the best interests of the profession? This question merits the most serious consideration and action of all of us. The medical profession remained largely aloof in Europe when the set-up for "state or socialized medicine" was being made with the results we see today—the standards of the profession and the care of the sick have been lowered with an increase in morbidity and mortality. The traditional patient-physician relationship has been jeopardized. There is no future for the physician in "state medicine." A great deal of the physician's time is spent with the making out of reports—so much so that often, in order to make a living, very little time can be given to any patient.

There should be a marked difference between "socialized medicine" and "state medicine." My definition of "state medicine" is: The regimentation and domination of the physician by the state so that his individual status is lost and he is at the beck and call of politics. In "socialized medicine" no political corruption should obtain. Sick and accident insurance is paid monthly under governmental direction and the individual has free choice of his physician. The physician does not work for the state. The individual pays the doctor for his services out of money received from his policy.

Solution of the problems before us must vary somewhat in different sections of the country due to varying conditions. But we must advance a solution or suffer the consequences. We are in a good position to press for an acceptance of our solution, provided it is a good one. Organized medicine has always worked consistently for the advancement of science and the improvement of health. Our record of achievement in recent years has been particularly good.

Adequate medical care, to my mind, is not always available. This fact must be faced and adequate care provided. This can be done not only by keeping the standards of the medical schools at their present status, but also by making post-graduate work more readily available. We physicians also fail to take advantage of our medical societies and hospital staff meetings. An exchange of ideas is valuable. The membership of the Mississippi State Hospital Association is pitifully small. One of our most potent weapons in fighting some of the wild proposals made by politicians is a large, united membership. The standards of our hospitals should be raised. A public which is satisfied with the present status of hospital care will be slow in accepting untried remedies. In line with this, it is my belief that the public should be protected by the hospital by setting a standard of surgical training which must be met before a surgeon may operate in that hospital. Our most serious obstacle is the indigent sick. The paid reformers, the unscrupulous politician, the heads of organizations, who seem to increase the prestige and scope of their organizations at the expense of the medical profession, all are making a great hullabaloo about the indigent sick—and they are a big problem. A great many insurance plans do not reach the indigent sick for the very simple reason that they cannot pay anything for insurance. In my opinion, they should be a state problem, and the state, by taxation or otherwise, should pay a reasonable fee for their medical care. There is no reason why, as is common today, that everyone else in the government set-up should receive pay and the physician work free of charge. The government's part in medicine should be limited, however.

Better medical care and adequate medical care for all peoples must be a matter of evolutionary and not revolutionary measure, if we are to provide the best for the people. Education of the student, of the public, and continued education of the doctor are important. We must, however, educate the public before their impatience, skillfully guided by inimical agencies, force some plan through which will be "state medicine" or worse.—W. H. Brandon.

* * * *

A WEAK SPOT IN MISSISSIPPI SURGERY

A very small percentage of the tissue removed at operation in this state is ever subjected to microscopical study, yet it is common and undisputed knowledge that many innocent looking specimens after careful histological examination yield evidence of maligancy and other pathological processes that were not suspected by the surgeon.

No doubt lives have been sacrificed by our neglect in more adequately correlating the science of surgery and pathology. The cause of this neglect is apparently twofold. First, inadequate pathological facilities in our state and second, the fact that to some surgeons the microscopic study of pathological material seems unnecessary and very frequently is neglected in view of an apparent gross pathological diagnosis. Something can be done about the former and the latter is certainly not justified when even the late and great Bloodgood admitted that his naked-eye diagnosis was not sufficient.

How can we overcome our weakness in pathological facilities? The ideal situation where each surgeon will have a good pathologist at his elbow for consultation is obviously out of the question since the many small hospitals and clinics in which the majority of surgical procedures are performed in this state cannot afford to supply this service. We can, however, by cooperative effort supply the facilities in one or more central laboratories where routine microscopic examination of all our surgical specimens will be made at a nominal cost.

Some surgeons have an aversion to "long distance pathology." This was entirely justified in bygone days when it required many days and sometimes weeks to obtain a report. But now the technique of the frozen section is so perfected that a 48-hour service could be obtained routinely and a 24-hour service in emergencies. Others will argue that routine histological examination of all surgical specimens is not necessary and is an added expense to the patient, but when we consider the fact that statistics have shown that if a surgeon has an 80 per cent correct diagnostic acumen in recognition of pathological tissue which he sees at the operating table, he is above the average, we are conscientiously bound to consider seriously whether the 20 per cent are receiving adequate treatment. I doubt if there are many experienced surgeons who cannot recall numerous instances when a routine histological examination of the surgical specimen completely changed his plan of treatment and prognosis. This is especially true in the handling of neoplastic diseases. In one of his publications Dr. William C. MacCarty of the Mayo Clinic related this data. "In 168 malignant conditions only 70.2 per cent were diagnosed positively malignant by the clinicians. 2.5 per cent were diagnosed benign and in 27.3 per cent malignancy was suspected as a possibility." It is easy to predict the eventual outcome of the 29.8 per cent of undiagnosed malignancies in this series had not the pathologist come to their rescue, particularly the 2.5 per cent that were misdiagnosed benign. It is this latter group that runs the risk of being mistreated altogether where routine microscopical examination of all surgically removed tissues is neglected. Even though this group is comparatively small it is sufficient to demand of us eternal vigilance.

I estimate that there are at least fifty hospitals in this state that need this service and can obtain it through an adequate central laboratory at a very nominal cost to each. A monthly payment plan, perhaps based on bed occupancy, would insure each surgeon the privilege of routine microscopical examination of all his surgical specimens and it has been my experience that the majority of surgical patients do not seriously object to pay for this check on the surgeon's diagnosis. In fact, more and more of them are being educated to demand it and if the small hospitals do not soon supply this service they will lose some patients to the institutions that do.

I believe this is a problem that the Mississippi State Medical and Hospital Associations should seriously consider in the near future and by co-operative effort a solution should be worked out that will fortify a weakness that most surgeons have recognized for some time but have been unable to do much about it individually.—A. M. McCarthy.

CANCER

The board of directors of Rotary International, sensing the vital importance of the present organized "fight against cancer," passed the following resolution at their meeting:

"The board recognizes that throughout the world earnest efforts are being made to ascertain the origin of cancer, and recommends to Rotary clubs everywhere, as they find opportunity to do so in their respective countries, to give encouragement to all efforts to accomplish this result."

GOVERNMENT AID FOR HOSPITALIZATION

RESOLUTION

The American College of Hospital Administrators is appreciative of the interest of the Federal Government in hospital service as expressed in the recommendations offered at the recent National Health Conference.

It approves of the extension of hospital facilities where needed, but cautions against the building of new institutions or adding to present institutions without an exhaustive survey of local needs.

It approves of financial assistance by government for the hospitalization of the indigent sick, if such assistance is based on the actual cost of rendering hospital service.

It recommends that no program of compulsory hospital insurance be considered until voluntary hospital insurance plans have had a thorough trial.

The Executive Secretary of the College is hereby instructed to transmit a copy of this resolution to the chairman of the Interdepartmental Committee to Co-ordinate Health and Welfare Activities.

Adopted Sept. 25, 1938, Dallas, Texas.

DO YOU KNOW THE MEANING OF THESE WORDS?

1. aeropiesotherapy
2. amylorrhea
3. anagocytic
4. anakmesis
5. aninsulin
6. arhigosis
7. athalposis
8. barbaralalia
9. benzestrin
10. carcinogen
11. cathepsin
12. causalin
13. chromagogue
14. clinomania
15. dextroclination
16. doryl
17. dyslalia
18. enterocrinin
19. evocator
20. fingeragnosia
21. ganoin
22. genin
23. granulotherapy
24. hematopidesis
25. hierolisthesis

All of the above are words used in medicine. Definitions on a following page.

"COPIED"

An Irishman's description of influenza: "Faith it's a disease that makes ye feel sick tin weeks after ye's well."

* * * *

Teacher: "William what are the two genders?"

William: "Masculine and feminine. The feminine are divided into frigid and torrid, and the masculine into temperate and intemperate."

* * * *

The other day a Kansan had removed from his ear a bug which got in it 48 years ago. A thing like that can become aggravating after a while.

* * * *

"What shall I do?" wailed the sweet young thing. "I am engaged to a man who just simply cannot bear children."

"Well," remarked the kindly old lady, "you must'nt expect too much of a husband."

* * * *

The wife was ill, so he went for the doctor, but as a bill was already owing, the doctor refused to go.

"Oh, do come!" he pleaded, "and I will pay you this time, kill or cure."

The doctor went, but unfortunately the poor woman died. The bill was not paid, so eventually the doctor sued.

At the trial the judge asked if he had anything to say, whereupon he put these questions to the doctor:

"Didn't I say I would pay, kill or cure?"

"You did," answered the doctor.

"Well, did you cure her?"

"No," said the doctor.

"Well," said the defendant, triumphantly, "did you kill my wife?"

No answer is recorded.

MISSISSIPPI STATE BOARD OF HEALTH

Prospects are bright for a new low in Mississippi's death rate. The state has less of sickness and death than the country as a whole, as proven over a period of years. During the first six months of 1938 the United States had the lowest death rate of its entire history, 11 deaths per 1000 persons.

While no 1938 figures are yet available for Mississippi, it is known that the death rate in Mississippi consistently runs below that of the United States. During 1936 the death rate in this state was 11.3, whereas for the country as a whole it was 11.5. In 1935 twenty-eight states had higher death rates than

Mississippi.

In view of Mississippi's large Negro population, which has a notably high rate of poverty, ignorance, and illness, Mississippi's death rate is considered exceptionally low.

However, as brought out by Dr. Abe Wolman of Baltimore, Maryland, new President of the American Public Health Association, which convened during October in Kansas City, the health condition of the average American citizen is 100 years behind what it should be. The death rate is still far too high compared with what can be done by the widespread use of existing medical and health knowledge.

The challenge is great to medical and health workers of today.

* * * *

"Learn About Syphilis and Pneumonia," in big, cut-out letters! "Syphilis May Be Cured!" "Serum Cuts Pneumonia Deaths by Half!" With such information the Mississippi State Fair abounded. And the exhibit struck home. For learn about syphilis and pneumonia hundreds of Mississippians did.

Since these two diseases are leading causes of sickness and death among thousands of state citizens every year, interest was keen in wax models, U. S. Public Health Service posters, posters made locally, pamphlets, and other means of showing how these killers can be prevented, diagnosed, and cured.

Favorite lady at the Exhibit was "Miss Anatomy," famous life-size model, with removable parts. Lectures on hygiene and physiology were given every half hour by a physician or nurse who demonstrated "Miss Anatomy."

The Fair Exhibit Committee consisted of Dr. A. L. Gray, Director of Preventable Disease Control, Chairman; Dr. D. V. Galloway, Supervisor of Venereal Disease Control; and Miss Eleanor Hassell, Assistant Supervisor of Health Education.

* * * *

Dr. Felix J. Underwood was Chairman of Health and Welfare Day at the State Fair, Wednesday, October 12, which was celebrated by an outstanding parade and the use of educational health films at the Hugh White Auditorium.

Many state health and welfare agencies entered floats in the parade. First prize was won by the State Sanatorium and State Tuberculosis Association, whose beautiful float in red and white pictured both the preventive and curative aspects in tuberculosis control. The State Board of Health float, pictured in the November issue, won second prize. Third prize went to the Junior Auxiliary of Jackson.

Responsible for the Board of Health float was a committee composed of Mr. H. A. Kroeze, Director of Sanitary Engineering, Chairman; Miss Gladys Eyrich, Supervisor of Dental Health; and Mr. Lewis Suber.

* * * *

Dr. J. W. Dugger, Director of Industrial Hygiene, State Board of Health, finds the annual physical examination which employes of the State Board of Health take, a leavening agent fast permeating numerous other institutions and groups.

Latest organization to receive Wassermann, tuberculin, and other tests was Millsaps College where Doctor Dugger was assisted by Dr. D. V. Galloway, Supervisor of Syphilis Control, in giving examinations the last week of October. Positive reactors to the tuberculin skin test will be x-rayed, and x-rays will be read at the Sanatorium.

During the past year, students have had thorough physical examinations through the assistance of the State Board of Health at M. S. C. W., State College, University, Millsaps, and Perkinston.

"These examinations among promising young people are a valuable piece of health education," Doctor Underwood declared, "as well as the proverbial stitch in time for those with defects."

* * * *

Current highlights in the mouth health program in Mississippi as brought out in Staff Conference, October 1, are the organizations in recent months of dental districts similar to medical districts, and the co-operation of dentists with the State Board of Health, as brought out by Dr. W. R. Wright, dental member of the Board, who was present.

Presiding over the conference was Miss Gladys Eyrich, Supervisor of Mouth Health. Miss Sarah Hill, D. H., Hinds County Health Department, explained and demonstrated the supplies in a dental hygienist's bag.

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Interested citizens in Newton, Batesville, and Brandon requested talks from Dr. Felix J. Underwood during October on the advantages of full-time county health departments. Organizations of full-time units will be undertaken in counties where these towns are located in the future.

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On October 4, Dr. Underwood and Dr. Harvey Garrison made a report to the Central Medical Society of the called meeting of the American Medical Association House of Delegates.

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Eighty nurses "came through" the semi-annual state nurses' examinations held in Jackson, October 3-4. Dr. Felix J. Underwood is President of the Nurses Examining Board and Miss Mary H. Trigg of Greenwood, Secretary.

* * * *

Health work among "the other half" in Mississippi came in for national recognition from Dr. Roscoe C. Brown, chairman of National Negro Health Week. This event is the yearly culmination of health activities among the Negro race.

Dr. Underwood received a Gold Seal certificate of merit in "testimony and commendation of civic co-operation for community cleanliness, improved home life and better health," among Mississippi Negroes.

Negro Health Week is conducted each spring throughout the nation, and awards are given in the fall.

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Recent changes in health officers have been announced by Dr. A. J. Milne, Director of County Health Work.

On November 1, 1938, Dr. Guy R. Post was temporarily appointed as Director of the Marshall County Health Department, Holly Springs.

* * * *

Dr. Post is a native of Virginia and a graduate of University of Maryland Medical School. He interned at Mercy Hospital, Baltimore, Maryland and has a certificate in public health from Johns Hopkins School of Hygiene and Public Health. He has had ten years experience in public health.

* * * *

Dr. J. Howard Hines, formerly Assistant Health Officer in Lauderdale County, has been named Director of the Madison County Health Department, Canton, relieving Dr. R. H. Biggs, who is on leave of absence.

Dr. J. H. Armstrong, formerly of Vaiden, has succeeded Dr. Hines as Assistant Health Officer in Lauderdale County. Dr. Armstrong is a graduate of University of Mississippi and of Tulane Medical School. He recently completed interneship in the Tennessee Coal and Iron Hospital, Birmingham.

* * * *

Latest and best laboratory technique for syphilis was demonstrated at a special meeting in Hot Springs sponsored by the U. S. Public Health Service, which Dr. H. C. Ricks, Director of the State Hygienic Laboratory, attended October 20-23.

* * * *

Figures pre-eminent in the field of public health have been invited to speak to members of the Mississippi Public Health Association convening in Jackson, December 8-9. Among them are Dr. Abel Wolman of Baltimore, Md., President of the American Public Health Association. Plans for the annual meeting of the Association were made October 7, when H. A. Kroeze, President of the Mississippi Public Health Association, called together the executive committee of this group. Dr. F. Michael Smith, Vicksburg, is President-Elect of the Association, and Dr. J. A. Milne is Secretary-Treasurer.

Dr. Underwood, Dr. R. N. Whitfield, Director of Vital Statistics; and Dr. A. L. Gray, Director of Preventable Disease Control attended the meeting of the American Public Health Association in Kansas City, Mo., on October 25-28.

Dr. Underwood read a paper before a joint session of health officers and public health nurses on "A Critical View of Nurses and Nursing Programs."

Dr. Whitfield discussed a vital statistics paper of Dr. J. V. DePorte, Registrar of New York State, and took active part in discussions of the proposed new birth, death, and stillbirth blanks to be used the next ten years, and the proposed new uniform registration law. Dr. Whitfield went to the Association two days early in order to attend special vital statistics committee meetings.

* * * *

Mr. Raglin Jones of the Texas State Board of Health visited the Mississippi State Board of Health during October in order to observe the sanitation set-up in this state.

Other visitors included: E. Allene Warren of the National Tuberculosis Association, New York; and Dr. John J. McShane, Illinois Department of Public Health, Springfield.

* * * *

The State Board of Health radio program over WJDX was as follows during October:

October 1: Dr. Henry Boswell, Superintendent State Sanatorium, Sanatorium, Mississippi—"Control Program on Tuberculosis."

October 8: Dr. Felix J. Underwood, Executive Officer, State Board of Health, Jackson, Mississippi—"Controlling Pneumonia I."

October 15: Dr. Felix J. Underwood, Executive Officer, State Board of Health, Jackson, Mississippi—"Controlling Pneumonia II."

October 22: Dr. J. A. Milne, Director of County Health Work, State Board of Health, Jackson, Mississippi—"Mouth Health Education for the School Child."

October 29: Dr. Estelle A. Magiera, Mississippi State Hospital, Whitfield, Mississippi—"A Healthy Personality."

Jackson, Felix J. Underwood,
November 4, 1938. Executive Officer

DO YOU KNOW THE MEANING OF THESE WORDS?

(Continued from a preceding page)

1. The therapeutic use of compressed or rarefied air.

2. The presence of an abnormal amount of starch in the stools.

3. Retarding or inhibiting the growth of cells.

4. Increase of early granular cells (stem cells) in the marrow with lack of further maturation, as observed in the marrow in agranulocytosis.

5.Insulin to which 1 per cent of formol has been added and the mixture incubated at 60°C. for forty to sixty days.

6. Inability to perceive cold; absence of the cold sense.

7. Inability to perceive warmth.

8. A form of dyslalia that is shown when speaking a foreign language.

9. A commercial estrogenic preparation containing estradiol benzoate.

10. Any cancer-producing substance.

11. A proteolytic enzyme found in many animal tissues.

12. A proprietary name for aminodipethylpyrazolon quinoline sulfonate used for the relief of pain in arthritis.

13. Tending to eliminate pigments.

14. An insane desire to lie in bed or at least in a horizontal position.

15. Extorsion of the right eye and intorsion of the left eye; called also dextrotorsion.

16. A proprietary carbaminoylcholine chloride, a stimulant of the parasympathetic nervous system. It causes decrease of the heart rate, a fall in blood pressure, and contraction of the muscle of the bladder and intestinal tract.

17. Impairment of utterance with abnormality of the external speech organs (Kussmaul).

18. A hormone from the intestine which seems to stimulate secretion of the gastric juice.

19. Needham's name for the substance or organizer which fixes the position of the embryo in its egg.

20. Inability to recognize, indicate on command, name or choose the individual fingers of one's own hand and of the hands of others.

21. An enamel-like substance produced by the malpghian cells of the dental anlage to form the ganoblasts or ameloblasts.

22. The noncarbohydrate group of a glucosidic molecule; called also aglucone.

23. The production of hyperleukosis by the intravenous injection of carbon or other material; for the treatment of infectious processes.

24. Hematidrosis. The sweating of blood or of a fluid mixed with blood.

25. Displacement of the sacrum.

(Definitions from The American Ill ed Medical Dictionary, by W. A. Newman Dorland, 18th ed., W. B. Saunders Co., Philadelphia, 1938).

INTERPRETING MEDICAL LITERATURE
PEDIATRICS

Harvey F. Garrison, Jackson

Measles. The Conduct of a School Epidemic.—F. G. Hobson, Brit. M. J. 4046:171 (July 23) 1938.—"What should be the course and outcome of an epidemic of measles in a school community? The answer to such a question must depend upon a number of considerations—clinical, seasonal, domestic and economic—and yet each medical officer of a school community must have before him an ideal that it will be his endeavor to realize when faced with the inevitable and recurrent onslaught of measles in the community for which he is responsible."

"Measles is due to a virus — as yet unidentified—and a natural attack of the disease is generally regarded as conferring a permanent immunity. Second and third attacks of the disease are well known to occur but are so rare that they can safely be ignored within the age limit of school life. It is frequently stated and generally assumed that an attack of measles, attenuated by the administration of immune serum, confers an immunity as permanent as that which results from a natural attack. This reasonable assumption may prove to be well founded but as yet it rests upon no solid body of clinical evidence."

"Measles vies with influenza and whooping cough as the most infectious disease in a closed or semi-closed community such as a school, and the prospects of limiting the spread of the disease by early diagnosis and segregation of infected individuals are very small. Koplik's spots appear too late and too inconstantly to be of any real value in early diagnosis, and may be recognizable only with the appearance of the rash in serum-treated cases."

1. "Susceptibles. — In each school there will be a small number of 'delicate susceptibles,' for whom an attack of measles will entail an unusual risk particularly in the case of those children who are liable to otorhinological or pulmonary diseases. For these cases, which should be selected by the school medical officer, serum prophylaxis is clearly indicated. For a few specially delicate susceptibles the dose should be one that will insure protection, such children should then be removed from school to avoid further exposure to infection on a falling tide of passive immunity. For the majority of cases of such delicate susceptibility the dose of serum should be so timed and adjusted as to secure attenuation of the attack, and these protected susceptibles should be allowed to continue with normal school routine. The routine use of convalescent serum

for all susceptibles has been established that the immunity from an attenuated attack is as permanent as that which results from a natural attack of the disease. The deliberate postponement of an attack of the disease by protecting all susceptibles, cannot be considered wise, although special circumstances may justify such a practice. Such special circumstances must be judged by the medical officer concerned, but a co-incident epidemic due to S. pyogenes or H. pertussis might be mentioned as a circumstance such as would justify an attempt at mass production or mass attenuation."

2. "Severity.—The complications of measles present the real danger to health and life, such complications arising from secondary infection by pyogenic cocci, particularly from S. pyogenes. A patient may be infectious six days before the appearance of a rash. The incubation period is over ten days. Serum treated cases may be twenty-one days."

The fact that those who succumb are suffering from the same disease must never be used as an argument for the relaxation of any of these accepted rules.

The author then proceeds to recommend bed spacing to be six feet apart, well ventilated rooms. He suggests that each doctor and nurse wear a mask in the sick room. All tableware should be sterilized after each meal. Each patient should have his own individual linen and towels. "Personal linen, towels, etc., must be so supplied as to avoid common use for exchange while paper handkerchiefs, which can be destroyed, should be employed for all nasopharyngeal discharges."

The author then proceeds to write the parents and acquaint them about the presence of the epidemic and the various means of protecting children with particular reference to giving immune serum. He makes the following recommendations to parents:

"For specially selected 'delicate susceptibles': "It is recommended that your child be given an injection of serum at once and taken home until the school is out of quarantine.

"Serum prophylaxis: The use of serum prophylaxis calls for judgment and discretion, and it may be helpful to give a brief summary of the known facts.

"Three preparations are available:

"A. Convalescent Serum.—Obtained from individuals who have recently recovered from an attack of measles.

"B. Adult Serum.—From adults who have experienced an attack of measles.

"C. Immune Globulin (Lederle).—This is the pooled globulin obtained from placentas.

"All three preparations when administered in adequate dosage prior to the 'critical day,' can undoubtedly exercise a favorable influence upon the course of an attack of measles. It is probably that the 'critical day'—that day of the incubation of the disease after which no protective therapy can influence its course—is the sixth day after exposure calculated from the first appearance of the rash of the infecting case. By this time, the disease may have been incubating in the susceptible individual for 6-10 days.

"Protection.—Where complete protection is desired the maximum dose should be given at the earliest moment after exposure, later than the third day after the rash of the infecting case the prospects of success are small. A protective dose confers no more than a temporary passive immunity.

"Attenuation can be achieved by two methods: (a) the early injection of a submaximal dose—that is before the third day; (b) the injection of a maximum dose later in the incubation period—that is on the sixth day."

This latter method has in the writer's experience proved to be the more satisfactory, and for obvious administrative reasons (obtaining parental consent, etc.), the more practicable.

Comment: Several years ago, it was my privilege to have had charge of some six hundred children in institutions in Jackson where an epidemic of measles with considerable severity occurred. I secured and pooled a quantity of immune serum and used it somewhat along the same way that is advocated by these authors. It is my opinion, based on an experience with this and other epidemics, that the use of serum as a temporary protection, and for the purpose of attenuating the disease is of inestimable value in selected cases and for these purposes.
November 8, 1938.

EYE, EAR, NOSE AND THROAT

Alston Callahan, Vicksburg

The Academy Meeting. — During the past month, from Oct. 9 to 14, the annual (43rd) meeting of the American Academy of Ophthalmology and Otolaryngology was held at Washington, D. C. This is the largest group of eye, ear, nose and throat specialists in the world, and it is considered the most outstanding not because of its magnitude but because each member has attained to certain high standards of ability. It is regrettable that of the registration of over three thousand at this meeting, only three were Mississippians. One of the unusual features that characterizes the yearly conventions is that half of each day is given over to instructional courses, where small groups meet with some authority on some particular point of interest, and there work out their problems. General assemblies occupy the other part of the day, and intensive study and training result.

Dr. Wm. Thornwall Davis, who has several times appeared on the program of the sectional meeting of the Mississippi State Medical Association, was in charge of the local committees, and the splendid arrangements were a tribute to his genius for organization. The guests of honor were the Surgeon General of the Army, Major Charles R. Reynolds, and Mrs. Reynolds, the Surgeon General of the Navy, Rear Admiral Percival S. Rossiter, and Mrs. Rossiter, and the Surgeon General of the U. S. Public Health Service, Dr. Thomas Parran and Mrs. Parran.

The scientific exhibits were held at the Army Medical Museum, under the direction of Col. J. E. Ash. The excellence of these exhibits was due in part to the fact that for several years a registry of eye, ear, nose, and throat pathology has been maintained by the Army Medical Museum for the Academy. The most interesting types of pathology were shown, with the aid of photographs, charts and drawings.

The technical exhibits were of note also, and one of the high points of the meeting occurred when one of the Fellows (Dr. Vail) roundly criticised the manufacturers of auralgin for claiming their product acted by osmosis. Much interest has been shown among otologists in this preparation; a scientific study of this product is to be admired, and if it is discovered that it possesses a deleterious action, its use should be discontinued. One of the general trends of progressive aural science is the use of the audiometer, and various makes of these devices were on display.

It is difficult to refrain from enthusiasm in discussing the scientific program because of advancement of medical knowledge and skill in the handling of difficult and insoluble conditions. There were not only exhaustive and detailed studies into fine points, but there were also symposia on such general topics as "Sinusitis," and "Dermatological Lesions of the Eye, Ear, Nose, and Throat."

May we add, as a footnote, that our great desire is to have more representation in this body? Listed alphabetically, there are only thirteen from this state that have been certified by these Boards: Drs. G. E. Adkins, Norman Applewhite, C. C. Buchanan, Alston Callahan, Sam Carruthers, Lucian S. Gaudet, B. S. Guyton, Van Dyke Hagaman, Robin Harris, Edley H. Jones, Chas. A. McWilliams, D. C. Montgomery, and J. C. Pegues. Yet we have many other capable ophthalmologists and otolaryngologists, and we would be happy to have them certified. It is true that the time is rapidly approaching when such evidence of ability will be necessary to protect the general public from inadequately trained "specialists."

In Memoriam

On October 29, 1938, Dr. J. Raymond Hume passed on to his reward. Originally a native of Indianapolis, he settled in New Orleans, and his ability rapidly brought him prominence and distinction. Up until the time of his death, he was the Professor of Otolaryngology in both the graduate and undergraduate schools of medicine of Tulane University. Many honors were showered upon him, but he remained to all, a kind, modest and unassuming friend.

Quite recently he was the moving spirit in the organization of the Louisiana-Mississippi Ophthalmological and Otolaryngological Society, and served as its first president.

Naturally, others will take his posts; but no one will ever take the place of "Ray" in the hearts of those who knew and loved him.

November 11, 1938.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION: Seventy-Second Annual Session and Thirty-Sixth Annual Session of the House of Delegates, Gulfport, May 9, 10, 11, 1939.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday, each month, Natchez, 7:30 p. m.

Amite County Medical Society: W. S. Stewart, Oskya, president; D. H. Thornhill, Crosby, secretary. Meets second Thursday, each month with Wilkinson County Medical Society, Field Memorial Hospital, Centreville.

Central Medical Society: J. T. Rainer, Yazoo City, president; Lawrence W. Long, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. D. House, Sledge, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: William

P. Warfield, Clarksdale, president; N. C. Knight Clarksdale, secretary. Meets second Wednesday each month, Alcazar Hotel, Clarksdale, 12 noon.

Coast Counties Medical Society: W. W. Lake, Pass Christian, president; D. L. Hollis, Biloxi, secretary. Meets first Wednesday, each month at night.

Delta Medical Society: C. W. Patterson, Rosedale, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

Desoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4, Memphis, secretary. Meets first Monday of January, April, June, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Harrison, Philadelphia, president; Bob A. Cameron, Meridian, secretary.

Franklin County Medical Society: C. A. Everett, Bude, president; L. Costley, Meadville, secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: B. B. Martin, Jr., Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Mississippi State Charity Hospital, Vicksburg, 7 p. m.

Marshall County Medical Society: C. R. Senter, Byhalia, president, Herbert Phillips, Holly Springs, secretary. Meets second Thursday each month, alternating between Byhalia and Holly Springs.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary.

North Mississippi Medical Society: R. M. Adams, Ripley, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen-County Medical Society: Dr. R. J. Brown, Iuka, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September, December.

Pike County Medical Society: E. M. Givens, McComb, president; T. Paul Haney, Jr., McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Sunflower County Medical Society: U. S. Wasson, Moorhead, president; H. B. Cottrell, Indianola, secretary.

Tallahatchie County Medical Society: G. Lacy Biles, Sumner, president; G. D. Hightower, Webb, vice president; J. E. Powell, Charleston, secretary.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: R. B. Zeller, Hazlehurst, president; J. C. McGuire, Hazlehurst, secretary. Meets June 14, Walthal Hotel, Tylertown; September 13, Riverside Hotel, Monticello; December 13, Whitworth College, Brookhaven, 12:30 p. m.

Webster County Medical Society: E. F. Arnold, Bellefontaine, president H. K. Curry, Eupora, secretary.

Wilkinson County Medical Society: C. L. Catchings, Woodville, president; E. M. Butler, Centreville, secretary. Meets second Thursday, each month, with Amite County Medical Society, Centreville.

Winona District Medical Society: T. J. Brown, Grenada, president; S. B. Caruthers, Grenada, secretary.

CENTRAL MEDICAL SOCIETY

The monthly meeting of the Central Medical Society was held at the Robert E. Lee Hotel Roof, Jackson, Tuesday, November 1, 1938, with dinner at 6:30 p. m. As announced by the secretary, Dr. Lawrence W. Long, the program included:

1. Brief Report of the American College of Surgeons Meeting.—Dr. J. P. Wall.

2. Surgical Treatment of Frontal Sinusitis.—Dr. Van Dyke Hagaman.

Discussion opened by Dr. Lauch Hughes and Dr. Robin Harris.

3. Bacillary Dysentery.—Dr. Harvey F. Garrison, Jr. Discussion opened by Dr. Guy Verner and Dr. John Bullock.

4. Sympathetic Causalgia.—Dr. P. A. Baines.

Discussion opened by Dr. L. W. Long and Dr. W. F. Hand.

5. Carcinoma of the Sigmoid with Recovery. —Dr. A. G. Ward.

Discussion opened by Dr. H. R. Shands and Dr. Jack Barksdale.

6. Emergency Treatment of Compound Fractures.—Dr. S. W. Thorne.

Discussion opened by Dr. F. H. Hagaman and Dr. Tom Blake.

Jackson, October 26, 1938.

CLARKSDALE AND SIX COUNTIES MEDICAL SOCIETY

The seventy-third semi-annual session of the Clarksdale and Six Counties Medical Society was held at Clarksdale, Wednesday, November 9. The program, as announced by the secretary, Dr. N. C. Knight, was as follows:

2:00 p. m.—American Legion Hut.
Call to Order—Reading of Minutes.
Secretary's Financial Report.
New Business.
Old Business.

Program sponsored by the University of Tennessee, Memphis:

1. Clinical Manifestations of Vitamin Deficiencies.—Dr. Conley Sanford, M.D., F.A.C.S., Associate Professor of Medicine, College of Medicine, University of Tennessee.
2. Vitamin Diets—Miss Fairfax Proudfit, Instructor in Dietetics, College of Medicine, University of Tennessee.
3. Therapeutics of Vitamins.—J. B. McElroy, B.S., M.D., F.A.C.P., Chief of Division of Medicine, College of Medicine, University of Tennessee.
4. Jaundice.—W. C. Colbert, M.D., F.A.C.P., Associate Professor of Medicine, College of Medicine, University of Tennessee.

RECESS

Alcazar Hotel ....7:00 P.M.

BANQUET

Election of Officers for 1939:
President from Tunica County.

5. Protamin Insulin.—Jacob Alperin, A.B., M.D., F.A.C.P., Instructor in Medicine, College of Medicine, University of Tennessee.

ADJOURNMENT

Clarksdale, Oct. 31, 1938.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Vicksburg, Tuesday, November 8, and after a supper served at 7:00 p. m., was called to order by the president, Dr. B. B. Martin, Jr., with nineteen members and four guests present.

The program included:

Papers and Discussions—Roentgenology and Radiology.—Dr. J. L. Hall, Vicksburg, Chairman.

(1) The Results of X-Ray Therapy on the Leukemias.—Dr. W. R. Bethea, Jackson.

Discussed by Drs. Leon S .Lippincott, A. Street and W. K. Purks. Dr. Bethea closed.

2. Selected Roentgenologic Studies of Heart Disease.—Dr. W. K. Purks, Vicksburg.

3. Case Report—Mississippi State Charity Hospital, presented by Dr. Edley H. Jones: Carcinoma of the Upper Jaw with Resection.

Dr. Edley H. Jones, director, presented the report of the out-patient clinic operated under the direction of the society for the month of October. It showed 1,527 patient visits or a daily average of 49. Patient visits by services were medical, 175; surgical, 168; obstetrical, 43; gynecological, 95; eye, ear, nose and throat, 94; orthopedic, 12; pediatric, 18; genitourinary, 710, of which 665 were venereal. Two hundred and twelve of the patients were admitted to the hospital. Patients came from sixteen counties of the state and one each from Louisiana, New Hampshire, and Texas.

The next meeting of the Society will be the annual meeting on Tuesday, December 13. Dr. Alton Ochsner, Professor of Surgery, Tulane, University, will speak on "Peptic Ulcer," and Dr. E. L. King, Tulane, on "Recent Advances in Obstetrical Anesthesia and Analgesia."

NORTH MISSISSIPPI MEDICAL SOCIETY

The regular Quarterly meeting of the North Mississippi Medical Society and Extension Course in Syphilology given by the Division of Medical Extension of Tulane University was held in Graduate Building, University of Mississippi, Oxford, Wednesday, and Thursday, November 9 and 10.

The Program as announced by Dr. A. H. Little, Secretary was as follows:

Program

Wednesday, November 9

A.M.
10:00 Tumors of the Larynx—Dr. F. E. LeJeune.
10:40 General Diagnosis of Syphilis—Dr. B. J. DeLaureal.
11:20 Thrombophlebitis—Dr. Alton Ochsner.

P.M.
12:10 Business Session.
12:30 Luncheon—Univ. of Mississippi Cafeteria
2:00 Skin Manifestations of Syphilis—Dr. M. T. Van Studdiford.
2:40 Present Day Conception of Uncomplicated Retroversion—Dr. H. W. Kostmayer.
3:20 Peripheral Vascular Disease—Dr. Alton Ochsner.
4:00 Syphilis Complicating Pregnancy—Dr. M. E. Lapham.
6:00 Banquet—University of Mississippi Cafeteria.
7:30 Hoarseness—Dr. F. E. LeJeune.

Thursday, November 10

P.M.
7:00 Pathology of Syphilis—Dr. B. J. DeLaureal.
Interpretation of Laboratory Tests for Syphilis—Dr. B. J. DeLaureal.
7:45 Diagnosis and Treatment of Early Syphilis—Dr. M. T. Van Studdiford.
8:30 Syphilis of Circulatory and Nervous Systems—Dr. B. J. DeLaureal.

9:15 Drug Reactions in Treatment of Syphilis—Dr. M. T. Van Studdiford.

ADAMS COUNTY

Dr. and Mrs. E. E. Benoist have returned from a motor trip to New York where Dr. Benoist attended the meeting of the American College of Surgeons. Enroute stops were made to the historic and garden spots of Virginia.

Dr. and Mrs. Homer Whittington are receiving congratulations on the arrival of a fine baby girl.

Dr. James Thompson of Jackson was the guest essayist at our October meeting of the Homochitto Valley Medical Society. Dr. Thompson's excellent paper dealt with the newer concepts and treatment of "Lymphogranuloma Inguinale."

At the last meeting of the Adams County Medical Society, a round table discussion of the medical problems recently brought up at the session of the House of Delegates of the American Medical Association, was led by Dr. J. W. D. Dicks.

To our Woman's Auxiliary much credit is due for recent purchases for the Charity Hospital and donations to the Preventorium at Magee.

Natchez, F. S. Dixon,
Nov. 4, 1938. County Editor.

DESOTO COUNTY

Mrs. Eddie Mai Wadsworth, wife of the Rev. L. R. Wadsworth, pastor of the Bartlett (Tenn.) Methodist Church, died Oct. 10, at the Methodist Hospital, Memphis, after an illness of three weeks. She was 50 yesterday. She was the mother of Dr. Henry M. Wadsworth and Miss Dorothy Wadsworth of Hernando. Pallbearers were the members of the Board of Stewards of the Bartlett Church. Our sympathy is extended to the bereaved in this sad hour.

We noticed in the last issue of THE MISSISSIPPI DOCTOR the death of the wife of Dr. W. H. Frizell of Brookhaven. We extend our sympathy. One feels lonely when he has lost his life's mate. In the loss of loved ones, you find solace and comfort in leaning on the Everlasting Arm. I have known Frizell since college days, he has always rung true.

Have you read "Young Doctor Gallahad?" The author, Elizabeth Seifert, won $10,000 with this, her first novel. Miss Seifert has done a creditable job. The whole book rings true, setting, people, hospital smell and all. And she relates her story quickly with little ado about it.

The Clarksdale and Six-Counties Medical Society held an interesting meeting. Members of the faculty of the University of Tennessee had leading parts on the program. Dr. W. H. Williams, Tunica, was elected president and Dr. N. C. Knight, Clarksdale, was chosen secretary-treasurer. Dr. M. B. Jernberg, Hollywood, was elected vice-president for Tunica County. This is our old society and we are ever interested in it.

A record attendance of North Mississippi doctors attended at the University Wednesday and Thursday for the program given by the North Mississippi Medical Society, in co-operation of the Division of Medical Extension of Tulane University. According to Dr. A. H. Little, secretary of the North Mississippi Medical Society, faculty members of the Tulane School of Medicine did the speaking.

Feature of the two-day meeting was the general symposium on syphilis. The course in syphilology was completed Thursday by Dr. M. T. Van Studdiford and Dr. B. J. DeLaureal.

The program, held at the Graduate Building on the University campus, opened Wednesday morning at 10 o'clock. Appearing on the program were Dr. F. E. LeJeune, Dr. B. J. DeLaureal and Dr. Alton Ochsner. The business session at 12:10 was followed by a luncheon at the University cafeteria. During the afternoon lectures were given by Dr. M. T. Van Studdiford, Dr. H. W. Kostmayer, Dr. Alton Ochsner, Dr. C. G. Collins and Dr. M. E. Lapham. A banquet at 6 o'clock followed the afternoon program. Dr. LeJeune was featured on the evening program at 7:30 o'clock.

The meeting was concluded Thursday night. The program began at seven o'clock and was under the direction of Dr. DeLaureal and Dr. Van Studdiford.

Dr. Maxwell Lapham of New Orleans is Director of the Division of Medical Extension.

* * * *

Medicine is not a profession that appeals to the man whose first desire is to make money. The appeals of medicine lie chiefly in other directions; in scientific interest, in the attractions of an independent career of usefulness, in the opportunity of occupying a respected position in his world and in the satisfaction of helping the suffering. Of necessity he, fortunately for him, has got to make a living in most cases, and that of course is the necessary motive of most men who go into medicine, as into every other vocation. But the other factors are the ones that furnish the great attraction of medicine, that are responsible for its noble record and for the high quality of men which the profession has attracted. And yet, in spite of the fact that it takes twice as long and costs twice as much for a young man to prepare for medicine as for any other familiar profession, young men come in adequate numbers to the profession.—

W. A. Pusey, M. D., Chicago.

We notice in the daily press that Dr. W. A. Evans, Aberdeen, leaves this week for a voyage to Peking, China, and will visit Australia before returning in the spring. Dr. Evans is Mississippi's best known doctor. We trust he will enjoy his trip.

On Monday, Nov. 14, at 5 p. m. in the Buntyn, Tenn., Presbyterian Church, Dr. Albert Vernon Richmond, Lake Cormorant, will wed Miss Flora Wellford of Memphis. Dr. Richmond is a native of this county and has practiced his profession successfully at his home town. Miss Wellford has been a chief aid in the office of Dr. J. L. McGee. Both are members of well-known Southern families and we predict for them much happiness.

Vernon waited a long time before taking this important step, but those who know both parties are satisfied that he has chosen well.

We noticed in yesterday's Memphis hospital list the name of Dr. Charles Whitley Emerson of Hernando. We trust that his malady is of a minor nature.

Just the reverse of this, Irvin S. Cobb, when informed that his hard boiled city editor was sick and in the hospital, replied that he hoped that the nature of the editor's illness was not of a minor nature.

We note that Memphis will invite the Southern Medical Association to meet in that city in 1939. Of course, we trust Memphis will be selected.

Seasons greetings to all that read these columns and best wishes.

Rt. 4, Memphis, Tenn. L. L. Minor,
Nov. 9, 1938. County Editor.

LEFLORE COUNTY

Dr. R. J. Peterson, Schlater, attended the world series in Chicago.

Dr. R. C. Finlay, Glen Allen, was a visitor to Greenwood Oct. 4.

Dr. J. C. Pegues, Greenwood, attended the meeting of the American Academy of Ophthalmology and Oto-Laryngology in Washington, D. C., Oct. 9-14.

Twelve of our local doctors attended the meeting of the Delta Medical Society at Indianola,, Oct. 12, and enjoyed the meeting very much.

Dr. R. J. Bostwick was a visitor to Greenwood Oct. 15, bringing a patient to our local hospital, from Indianola.

Dr. and Mrs. R. D. Dickins, Monticello, Ark., visited Dr. and Mrs. W. B. Dickins and family, Greenwood, Sunday, Oct. 16.

Dr. W. D. Hickerson, field clinician, State Board of Health, Division of Tuberculosis Control, visited our local health department Oct. 19-25.

Dr. T. B. Holloman, Thornton, was a visitor to Greenwood, Oct. 25.

Mr. and Mrs. John W. Dickins, Leland, announce the arrival of a daughter, Dorothy Jane, born at the Greenwood Leflore Hospital, Oct. 28. The young lady is the second granddaughter of Dr. and Mrs. W. B. Dickins.

Dr. and Mrs. L. F. Ferguson, Greenwood, visited relatives in Vardaman, Sunday, Oct. 30.

Greenwood, W. B. Dickins,
Nov. 1, 1938. County Editor.

HOSPITAL STAFF TRANSACTIONS

MISSISSIPPI STATE HOSPITAL ASSOCIATION, Tenth Annual Session, Gulfport, May 8, 1939.

Aberdeen Hospital: Third Monday, each month, 7:00 p. m.

Anderson Infirmary: First Friday, each month, 6:30 p. m.

Biloxi Hospital: First Thursday, each month, 7:30 p. m.

Bramlett Hospital: Third Wednesday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 12:00 noon.

Field Memorial Hospital: Second Thursday, each month, 6:30 p. m.

Gilmore Sanitarium: Third Thursday, each month, 8:00 p. m.

Greenwood-Leflore Hospital: First Thursday, each month 6:30 p. m.

Grenada Hospital: Second Tuesday, each month, 6:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month. 7:30 p. m.

Holmes County Community Hospital: Second Thursday, each month, 7:00 p. m.

Houston Hospital: Last Thursday, each month, 7:30 p. m.

Ivy Hospital: First Monday, each month, at 7:00 p. m.

Jackson County Hospital: Second Thursday, each month, except July and August, 7:00 p.m.

Jackson Infirmary: Last Tuesday, each month, except three summer months, 7:00 p.m.

King's Daughters Hospital, Brookhaven: First Tuesday, each month, 7:00 p. m.

King's Daughters Hospital, Greenville: First Wednesday, each month, 7:00 p. m.

King's Daughters Hospital, Gulfport: Third Thursday, each month, 8:00 p. m.

King's Daughters Hospital, Yazoo City: First Monday, each month, 7:30 p. m.

Macon Hospital: First Tuesday, each month, 7:30 p. m.

Magee General Hospital: Twenty-fifth each month, 7:30 p. m.

Mayes Hospital: First Monday, each month, 2:30 p. m.

McComb City Hospital: First Tuesday, each month, 6:00 p. m.

McComb Infirmary: Second Thursday, each month, 7:00 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Mississippi State Hospital, Vicksburg: Third Tuesday, each month, 7:00 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

New Albany Hospital and Clinic: Second Tuesday, each month, 8:00 p. m.

Newton Hospital: Second Thursday, each month.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Oktibbeha Hospital: Last Thursday, each month, 7:30 p. m.

Oxford Hospital: Last Monday, each month.

Pontotoc Clinic: First Tuesday, each month, 7:30 p. m.

Rush's Infirmary: First Friday, each month, 7:30 p. m.

Scott County Hospital: Third Wednesday, each month.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

Tylertown Hospital: Second Thursday, each month, 7:00 p. m.

U. S. Veteran's Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:30 p. m.

HOSPITAL STAFF TRANSACTIONS

GREENWOOD-LEFLORE HOSPITAL

At the regular staff meeting of the Greenwood Leflore Hospital, Oct. 6, Dr. J. P. Bates was elected president, Dr. S. L. Brister, Jr., vice-president, and Dr. I. B. Wright, secretary-treasurer. Illustrated films of "Vomiting in the Newborn" were shown. Dr. F. M. Sandifer reported a death from fracture of the 3rd cervical vertebra, and hemorrhage in the cord, in a boy diving in shallow water. Dr. George Baskerville reported the death of a man with chronic myocarditis, and Dr. G. Y. Gillespie, Jr., a death from cerebral hemorrhage from hypertension, and general arterio-sclerosis.

Greenwood, W. B. Dickins
Nov. 1, 1938.

On Thursday night, September 29, at 7:00 p. m. the Houston Hospital held its regular monthly staff meeting in the lobby of the hospital. Preceding the program, supper was served to one of the largest attendances in several meetings. Dr. Willis C. Campbell, Department of Orthopedics, University of Tennessee, Memphis, gave a paper illustrated with slides on "Malunited Fractures." Following a discussion on Dr. Campbell's paper, Dr. J. F. Hamilton. Department of Medicine, University of Tennessee, Memphis, discussed "Treatment of Peripheral Vascular Diseases." Dr. Hamilton's paper was emphasized by slides. A general discussion followed with all doctors present, taking an active part.

The following doctors were present: Willis C. Campbell, J. F. Hamilton, J. G. McFetridge, S. H. Davis, W. H. Curry, S. E. Eason, W. C. Walker, J. C. Green, E. F. Arnold, C. W. Patterson, H. H. Tabor, J. James, R. E. Shands, A. J. Stacey, I. B. Trapp, Douglas D. Baugh, E. K. Guinn, E. W. Crocker, J. M. Hood, D. H. Fondren, B. J. Shaw, G. G. Armstrong, F. L. McGahey, J. S. Edmondson, W. J. Aycock, A. E. Reed, S. K. Gore, J. R. Williams, R. E. Priest, R. B. Caldwell, H. A .Stokes, O. B. Crocker, W. J. Dawson, H. K. Curry, C. M. Roberts, J. H. Stennis, V. B. Philpot.

* *

The Houston Hospital held its regular monthly Staff Meeting in the lobby of the hotel on Thursday evening, October 27, at 7:00 p. m. After supper was served, Dr. James S. McLester, past president of the American Medical Association, Birmingham, Ala., gave a very interesting paper on "Coronary Occlusion." With Dr. McLester leading the discussion, the attitude of the American Medical Association toward "Socialized Medicine" was freely discussed by all physicians present. Dr. McLester declared that the A. M. A. has been unfairly criticized for its opposition to "Socialized Medicine." He explained that the A. M. A. is not unalterably opposed to a feasible plan of government aid to those who cannot afford adequate medical treatment, but is merely trying to keep the profession itself free of governmental interference. Dr. G. S. Bryan, Amory, introduced Dr. McLester, and Dr. J. Rice Williams presided over the meeting.

The following doctors were present: E. B. Young, S. K. Gore, A. K. Naugle, F. C. Spalding, J. B. Trapp, H. H. Tabor, J. S. Edmondson, G. T. McPhail, H. K. Curry, Douglas D. Baugh, W. H. Curry, J. A. Hardin, S. E. Eason, O. B. Crocker, S. T. Gore, J. Rice Williams, James S. McLester, G. S. Bryan, J. J. James, D. H. Thomas, Henry Bley, W. H. Rouse, T. W. Paden, E. B. Burns, W. H. Eason, J. L. Trice, W. C. Walker, C. W. Patterson, J. A. Raymond, W. J. Aycock, J. M. Hood, E. K. Guinn, G. G. Armstrong, S. H. Davis, R. E. Priest, V. B. Philpot.

The regular monthly meeting of the Ivy Hospital staff was held November 8, at 5 p. m.

All members were present except Dr. T. K. Chandler, who had resigned. Dr. Chandler's resignation being due to his acceptance of a full time position with the State Board of Health.

New officers were elected: President, Dr. F. P. Ivy; Treasurer, Dr. A. K. Naugle; Secretary, Dr. George A. Campbelle.

A number of business matters for the advancement of the service of the hospital were discussed.

A program was arranged for the next monthly meeting which will be the first Monday of each month, at 5 p. m. This program will consist of a paper on "Pyuria," by Dr. George A. Campbelle and a short talk by Dr. J. A. Stewart, the subject to be announced later.

A new surgical diathermy unit (Liebel Forsheim) has been added to the hospital equipment. This machine is the last word in units of this type. It was demonstrated to the members of the staff.

West Point, George A. Campbelle,
Nov. 9, 1938. Secretary.

VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Thursday, November 10, and after a supper served at 6:30 p. m., was called to order by the president, Dr. Leon S. Lippincott, with thirteen members and one guest present. The program included:

Reports from the Records Department and Analysis of the Work of the Hospital.

Report on Vital Statistics.—Dr. F. Michael Smith, Director, Warren County Health Department.

Cancer Clinics—For Discussion:

(1) Adeno-carcinoma (grade IV) of breast and axilla.—Dr. A. Street.
(2) Basal Cell Carcinoma of Face.—Dr. A. Street.
(3) Squamous Cell Carcinoma (grade IV) of Cervix Uteri.—Dr. R. A. Street, Jr.
(4) Squamous Cell Carcinoma (grade IV) of Leg.—Dr. D. P. and A. Street.
(5) Squamous Cell Carcinoma (grade IV) of Floor of Mouth.—Drs. G. M. and A. Street.
(6) Squamous Cell Carcinoma (grade I) of Forearm.—Dr. A. Street.
(7) Squamous Cell Carcinoma (grade III) of Skin of Neck.—Dr. J. A. K. Birchett, Jr.
(8) Transitional Cell Carcinoma of Bladder.—Dr. A. Street.
(9) Transitional Cell Carcinoma (grade IV) of Bladder.—Dr. A. Street.
(10) Mixed Cell Tumor of Parotid Gland.—Dr. J. A. K. Birchett, Jr.
(11) Cancer of Adrenal.—Drs. G. C. Jarratt and A. Street.

Special Case Reports:

(1) Carcinoma of Bladder.—Dr. A. Street.
(2) Compound Fractures of Forearm.—Dr. J. A. K. Birchett, Jr. Discussed by Dr. W. E. Johnston.
(3) Post Measles Encephalitis.—Dr. G. C. Jarratt.

Special Report:

The Recent Meeting of the American College of Surgeons in New York.—Dr. G. M. Street.

Demonstration of Selected Roentgen Ray Studies.—Kohler's disease, bilateral; carcinoma of pelvic bones, metastatic from prostate; hydronephrosis; renal tumor.

Dr. Leon S. Lippincott, president, appointed the following to serve as a nominating committee to present names for election of officers at the next meeting: Drs. George M. Street, J. A. K. Birchtt, Jr., and L. J. Clark.

The next meeting of the staff will be held Monday, December 12, 1938, at 6:30 p. m.

The following have contributed to the Mississippi State Hospital Association section of the journal this month:

County Editors: Adams, F. S. Dixon; DeSoto, L. L. Minor; Leflore, W. B. Dickins.—3.

Societies: Central, Lawrence W. Long; Clarksdale and Six Counties, N. C. Knight; Issaquena-Sharkey-Warren Counties.—3.

Papers: John G. Archer; Chester D. Allen; S. L. Brister, Jr.—3.

Interpreting Medical Literature: Alston Callahan; Harvey F. Garrison.—2.

Hospitals: Greenwood-Leflore, W. B. Dickins; Houston; Ivy, George A. Campbelle; Vicksburg Sanitarium.—4.

Others: J. W. D. Dicks; Gladys Ratcliff; W. H. Brandon; A. M. McCarthy; Felix J. Underwood.—5.

Total, 20.

Thank You!

WOMAN'S AUXILIARY
TO THE
MISSISSIPPI STATE MEDICAL ASS'N

The Mississippi Medical Auxiliary was well represented during the meeting of the Southern Auxiliary in Oklahoma City November 15-18.

It was a most enjoyable meeting with a constant round of social affairs. Many private and sectional parties were given besides the stated general ones, making the four days a ceaseless procession of activities.

Mrs. W. W. Crawford, of Hattiesburg, was elected historian, and the councilor for Mississippi will be appointed to succeed Mrs. Harvey F. Garrison.

DOCTOR'S DAY

From Mrs. Edwin Benoist of Natchez comes the first report of "Doctor's Day."

"A very beautiful event of the Thanksgiving season was the "turkey" dinner party at which the Auxiliary of the Adams County Medical Society entertained in honor of the members of the medical society at the home of Dr. and Mrs. H. M. Smith.

The spacious old home of Dr. and Mrs. Smith was invitingly lovely for the occasion with decorations of the greatest profusion of gorgeous chrysanthemums in a variety of color.

One long table seated the guests. Rich appointments with clusters of chrysanthemums arranged in artistic effect between settings of crystal and silver extended the length of the table.

Covers were laid for more than thirty.

Following the dinner, Dr. Edwin Benoist delightfully entertained the guests with movies of scenes taken on a recent trip of Dr. and Mrs. Benoist to various points in the East and also of many colorful pictures of the two Pilgrimages to the ante-bellum homes around Natchez.

Central Medical Auxiliary at Jackson is active during these pre-holiday months with Red Cross Roll Call and the Christmas Seal Sale publicity.

Mrs. Harvey F. Garrison, as chairman of ward 6 in the Women's Division of the Red Cross, chose the majority of her workers from among the Auxiliary members living in that ward and they secured a far greater number of members and contributions for the Red Cross than any other ward in the city.

Educational talks and 13 radio programs pertaining to the Christmas Seal Sale have been arranged by Mrs. F. L. Van Alstine and her committee.

We must also call attention to the very lovely table scenes posed by our Preventorium chairman, Mrs. Henry Boswell and the children selected for this purpose, and which are being used so effectively in the newspapers for Christmas Seal publicity.

Mrs. Gayden Ward is closing the details of the Preventorium Essay Contest.

Having received a short time ago the November issue of the News Letter of the Auxiliary to A. M. A. I would like members to read a few excerpts from the message of the president, Mrs. Charles C. Tomilnson and the first vice president, Mrs. Frank N. Haggard.

"In reviewing the work of my predecessors, I am astounded by their foresight and am constantly stimulated by their inspiring analysis of the problems of Auxiliary. Our phenomenal growth has proceeded from a fountain in principle which will stand the test of time and which, with the darkness of chaos everywhere about, shines as a beacon light on the path to our goal.

"In our community and in my state the Auxiliary has served to develop a more friendly feeling between physicians and between the families of physicians, and has brought about a realization of the fact that we have a common goal. Epoch making possibilities lie before us. Our organization has cast off its 'toddling clothes' and stands more than 20,000 strong in support of its objectives—let us know well our objectives—let us convince all that 20,000 wives of doctors must be right."

Mrs. Tomlinson then gives news of the various component Auxiliaries which she has visited since taking the leadership of the Auxiliary.

Nebraska, her home state, Wisconsin, Michigan, Minnesota, Kentucky, Tennessee, West Virginia, the A. M. A. offices in Chicago and a conference with Mrs. Simonds, Press and Publicity chairman, have all received inspiration from her visits as did the Southern Auxiliary meeting in Oklahoma City at which she was a featured speaker.

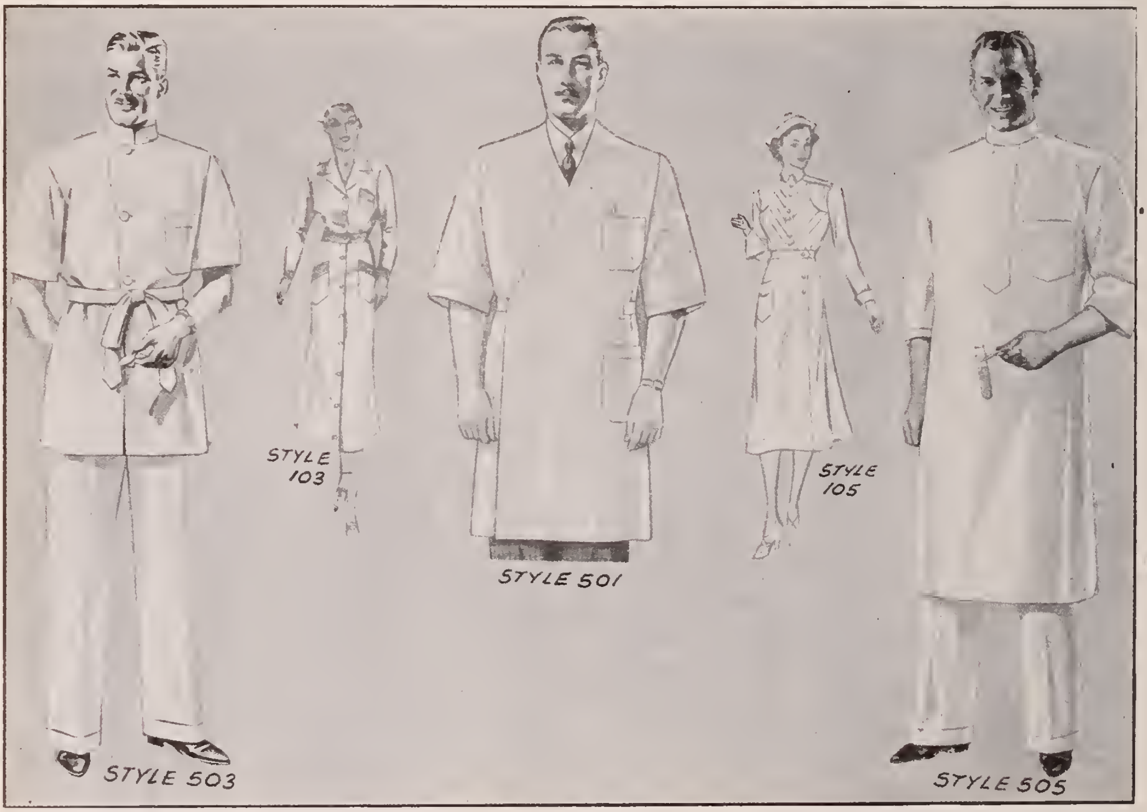
From Mrs. Frank N. Haggard we have the following message in part: "Organizations are created to meet human needs—social, religious, educational, or others.—The Medical Auxiliary is no exception. It meets the needs to which it has pledged its efforts as adequately as any group of women throughout our nation.

"As doctor's wives we should acquaint ourselves with the trends in propaganda and in proposed legislation which affect the medical profession. While the National Health Program is being discussed by the public and promoted by the government bureaus, the doctors in their own way and at their own expense are continuing to improve themselves and their work. They are also continuing their attempts (efforts) to prevent the public from being deceived by misleading statements concerning health subjects in advertisements, radio programs, lectures and books. With a medical auxiliary in a community, the doctors have effective aid in combating falsehoods with truth.

"We are living in a time when alert intelligence and devoted attention to the business in hand afford the only hope of security. The whole civilized world is in ferment. Shall we, because of easy-going indifference toward pressing issues of the day, permit the public to determine the place of our doctors in the national and other health programs? The Auxiliary, more than any other woman's organization, is informed on health questions, has the best interest of the medical profession at heart, loves its traditions and ideals and is determined to uphold its highest standards.

"At the present time the greatest help the Auxiliary can give the medical profession is to endeavor to have EVERY DOCTOR'S WIFE AN AUXILIARY MEMBER—a slogan that only united interest can accomplish. If every county medical society should announce its desire for an auxiliary, not only would its own membership be increased but also a decided change in health programs in its community would be noted.

"The Auxiliary program of work is broad enough to appeal to women of every age."



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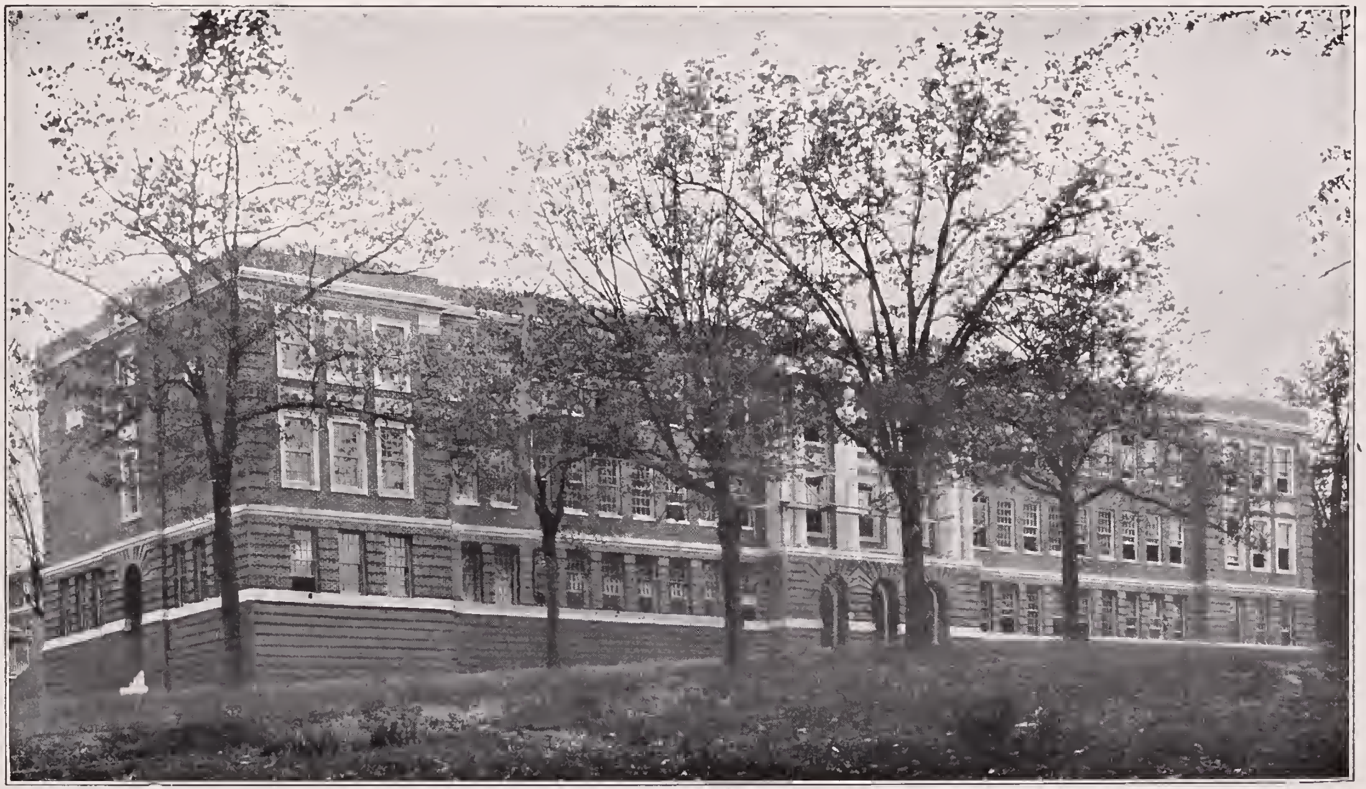

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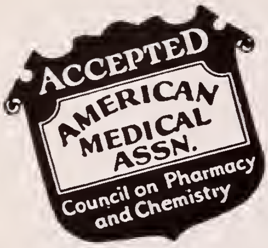
We have no more right to consume happiness without producing it, than to consume wealth without producing it. —Bernard Shaw.

'Tis not what man does which exalts him, but what man would do.—Browning.

The man who doesn't read good books has no advantage over the man who can't read them.—Anon.

How strong is the man who realizes his obligations! Let not the sun go down on any debt that you can pay . . . begin the New Year square with mankind and square with God.—Russell H. Conwell.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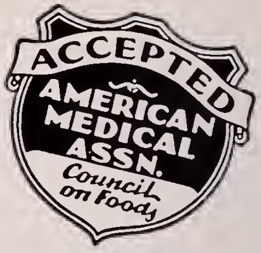

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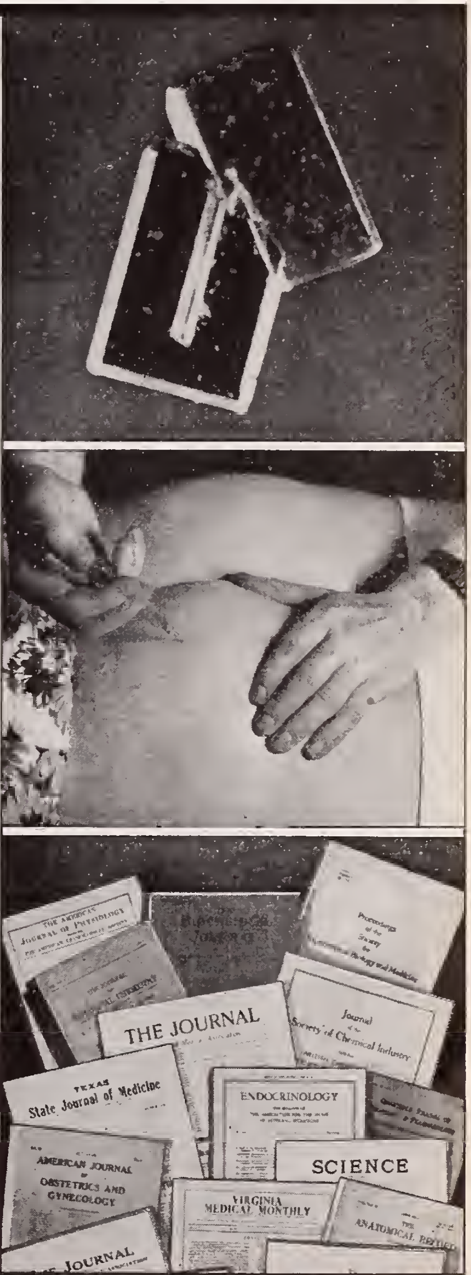
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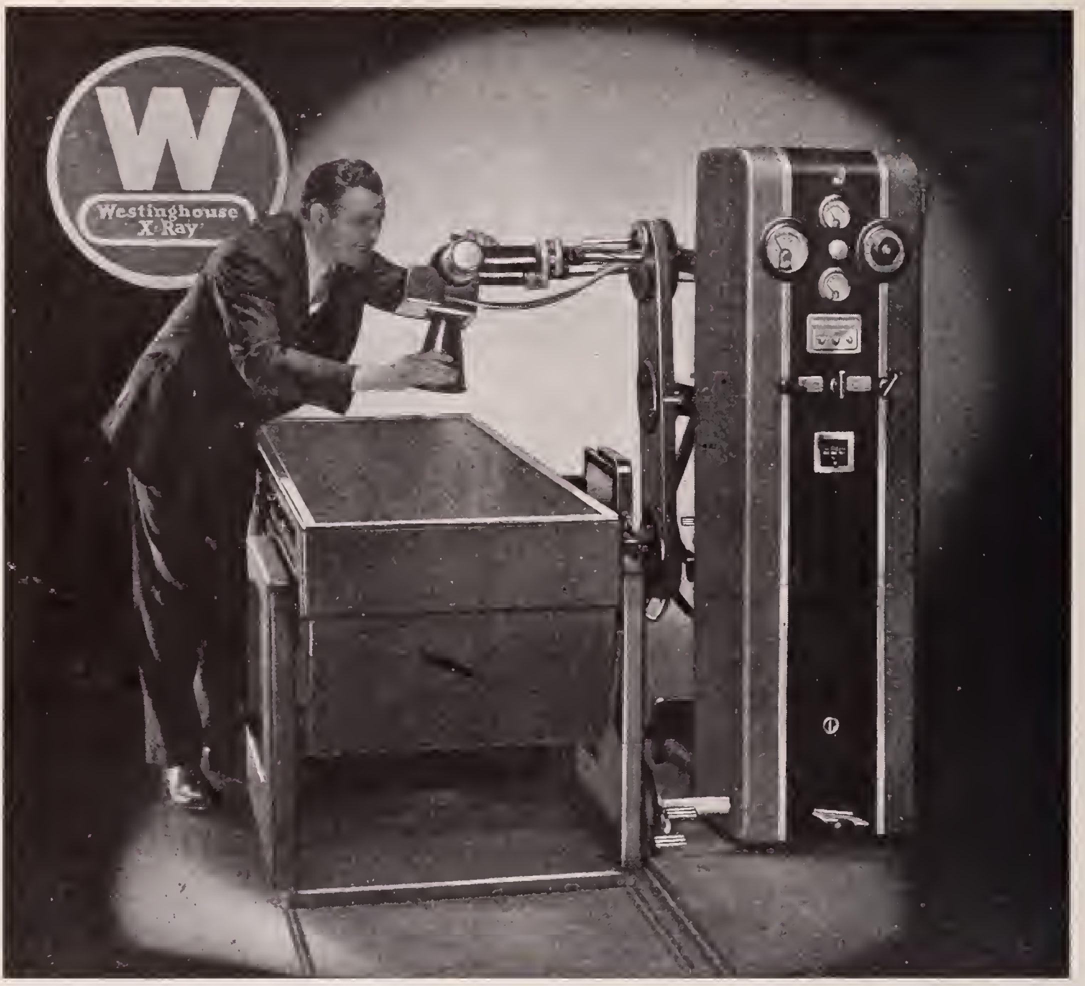

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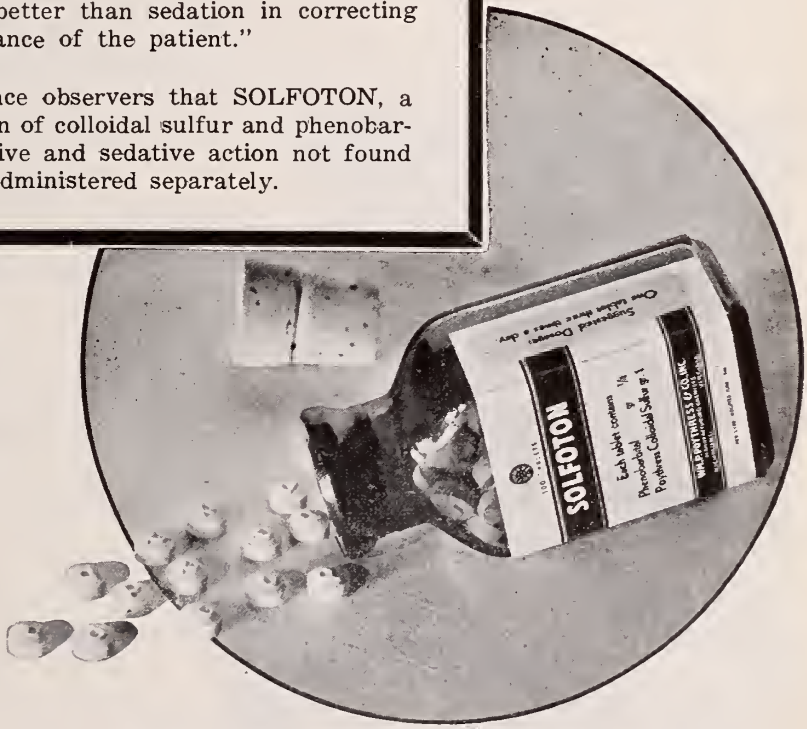
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—IRVING, NEW YORK STATE JOURNAL OF MEDICINE, JAN. 15, 1938.

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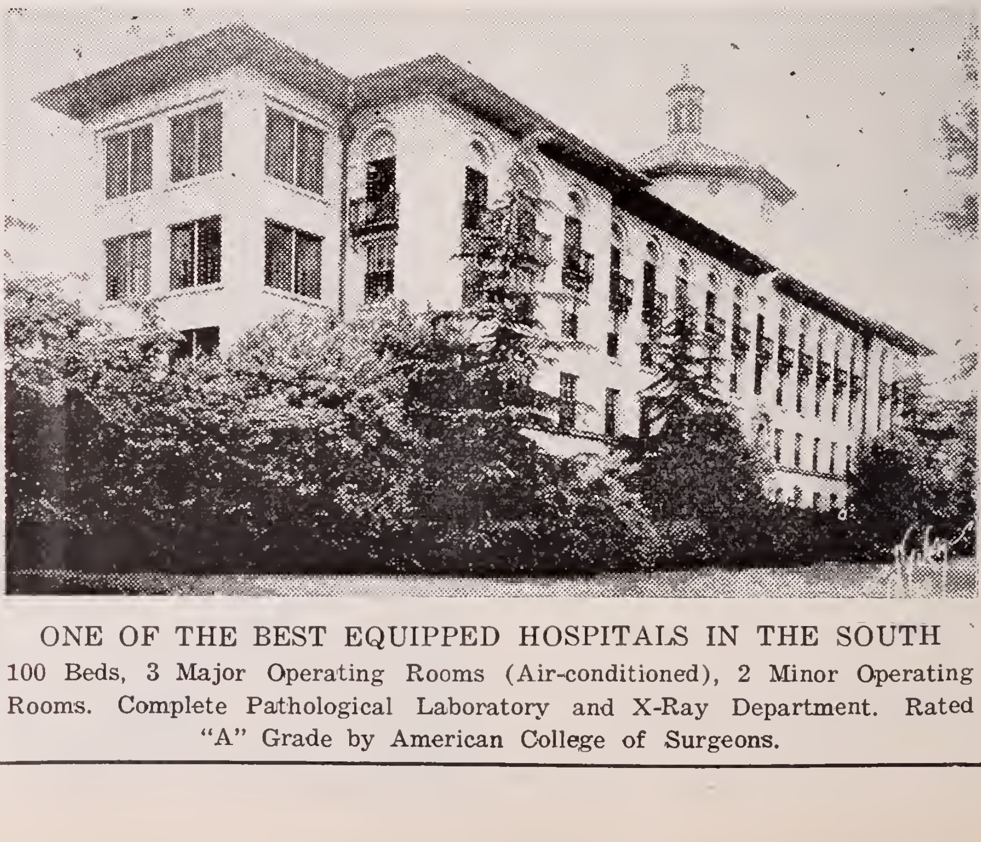

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Modern Treatment Of Lobar Pneumonia In General Practice*

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THIS PAPER is not a plea for the abandonment of the older, well-established methods of symptomatically treating lobar pneumonia. It aims rather to urge the more widespread adoption of the newer and more specific methods of treating this disease in general practice. The methods can be used in the home as well as in the small community hospital. In the light of this experience it has been found that, within certain limits defined by economic considerations, the treatment of lobar pneumonia in such rural communities can and should approximate that available in the large hospital centers. All that is necessary to bridge the apparent difficulties is the exercise of a little ingenuity which will often make the application of some of these newer methods surprisingly inexpensive and simple.

In the home treatment of pneumonia the country doctor has to contend as well as the city doctor, not only with the limited purses, but also with the unlimited prejudices of the patients. He must use the utmost tact in disposing of the unimportunate therapeutic suggestions or demands of over-zealous friends and relatives of the patient. These range all the way from an onion rub to a tar poultice. Occasional concessions may have to be made, but the physician is wise to assert his authority at the outset and to "choose his own weapons." He must remember that under home treatment, the patient is more apt to be overtreated than undertreated. The patient should also be spared frequent exhausting and unnecessary examinations, and the family should be reassured that physical signs take hours or days rather than seconds or minutes to develop.

NURSING CARE

It is generally recognized that good nursing care is one of the most important factors in the successful treatment of this disease. If possible, the physician should insist that a graduate nurse be employed. Here again he is apt to encounter strong prejudices; members of the family may assert, for example, that they "would rather wait on the patient than on the nurse." The family must be reassured that the present generation of graduate nurses is well able to take a hand in the general household, the condition of the patient permitting. It should also be emphasized that it is hardly logical to insist on a well-trained physician who is present for only a small part of the day, while entrusting the care of the patient during the greater part of the day to an untrained person. If the family cannot afford to pay a graduate nurse's fee, it will be necessary to employ a "practical" nurse. And in this case it develops on the physician to teach the nurse to carry out the more important nursing procedures.

SERUM THERAPY

It has been definitely established that serum therapy diminishes the mortality in lobar pneumonia. This treatment saves a considerable number of patients who otherwise would die. Just as appendicitis is an acute surgical emergency, so is lobar pneumonia an acute medical emergency. It is not to be put off, for example, until "after office hours." An immediate etiologic diagnosis must be made. In a good proportion of cases the finding of the etiologic agent indicates what specific treatment is necessary. Since the physical signs of consolidation may not appear before the second or third day of the disease or not at all, and since serum therapy loses most of its effectiveness after the first few days, it must be started as soon as the type of the pneumococcus causing the pneumonia is determined (if, indeed, the type found is amenable to serum therapy). To label true cases of lobar pneumonia in which frank signs of consolidation have not yet appeared as "threatened pneumonias" and to wait for the development of signs, is to lose valuable time. In most cases the characteristic onset with chill, temperature over 102°F., cough, prostration, pain in the side, rapid respirations and bloody or rusty sputum is enough to make a clear-cut diagnosis of lobar pneumonia.

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*Read before the staff meeting of the Community Hospital, Tupelo, Miss., Dec. 12, 1938.

Once the diagnosis is made and the patient is comfortable, sputum should immediately be obtained and the type of pneumococcus, if any, should be determined. Often the patient has to be coaxed, or even taught how, before he is able to raise sputum. Depending on the accessibility of a bacteriological laboratory and the physician's ability to carry out the necessary serological procedures himself, the sputum will then either be sent to the nearest laboratory for typing or will be typed by the physician in his office. The new Neufeld technic has so cut down the time necessary to determine the type that only a few minutes are required. First a Gram stain should be done to determine whether a pneumococcus is present. The Neufeld technic denotes the type by the swelling of the capsule of the pneumococcus in the presence of specific (rabbit) antiserum. Tests should be carried out at least with Types 1 and 2, and where feasible, Types 3, 5, 7 and 8 should also be tried. The therapeutic value of Types 1 and 2 antiserums is quite well established, and favorable reports have appeared following treatment with Types 5, 7, 8 (now commercially available) and 14 pneumococcus antiserums.

When no sputum is available it is important to try one of the other methods of identifying the organism rather than to wait for the sputum which may never be obtained. Pharyngeal swabbings may be cultured by dipping the swab into a sterile test tube containing 2 c.c. of ascitic broth. The organism may be typed after four to six hours' incubation. The blood culture, another procedure that can be easily carried out in the home, may likewise enable the physician to identify the organism when sputum is not available. The commercially available tube, which sucks the blood from a vein directly into the culture medium, eliminates the elaborate technic of culturing blood used in large hospitals. The organism may be typed from the blood culture after twelve to twenty-four hours' incubation. Even when the pneumococcus has been identified from the sputum the blood culture may give valuable information. It keeps the physician informed as to whether bacteremia is present and may indicate the need for the continuation of serum therapy. It is also of great prognostic significance, persistently positive blood cultures being a bad omen.

Since Types 1 and 2 pneumococci are rarely found in the throats of normal persons, the finding of either of these types may be regarded as sufficient evidence that the organism is the etiologic agent in the particular case, and the specific antiserum should be given at once.

When delay prevails it is still considered justifiable to administer polyvalent (Types 1 and 2) antiserum without waiting for type determination. Beyond the waste of serum, the expense and the subsequent production of a sensitivity to horse serum, such a procedure does no harm and the possible benefits at the time of the emergency may more than outweigh these disadvantages. With the advent of the Neufeld technic, however, it seems that this "shotgun" method of treatment will not have to be used so frequently.

In children under twelve years of age several factors militate against the use of serum therapy. The death rate is low; the veins are difficult to enter, and repeated intravenous injections practically impossible; Types 1 and 2 pneumococci are found in a much lower percentage of cases than in adults; and no conclusive results are as yet available as to the value of serum therapy in childhood. Hence in the present state of our knowledge typing may be dispensed within such cases. Nor should serum be given to elderly debilitated patients, moribund patients, patients with acute pulmonary edema or patients in stupor, coma or shock. Blood transfusion in children seriously ill with bronchopneumonia is of much value, and has been used very successfully by Dr. Unger of New York City.

Before giving serum it must be determined whether the patient is sensitive to horse serum. If he has never been able to go near horses without developing asthma or hay fever, if he has had an injection of horse serum within the previous three months, if the conjunctival test with horse serum is positive, or if the intradermal test with diluted (1:100) horse serum is strongly positive, serum should not be given. Serum therapy may be very cautiously attempted in the absence of any of the above enumerated contraindications, in patients giving a personal or family history of allergic diseases, in those who have had horse serum injections more than three months previously or in those showing a mild intradermal reaction with diluted (1:100) horse serum. In cases falling in this group it is advised that

0.5 or 1 c.c. of the serum be first injected intramuscularly. If no untoward reaction develops within an hour, serum may be given intravenously by the usual method. If, on the other hand, a reaction does occur, desensitization must be carried out. This is a laborious and painstaking procedure but well worth the trouble and, fortunately, rarely necessary. To desensitize, the serum is injected subcutaneously at twenty-minute intervals, doubling the dose at each injection. The initial dose should be 0.01 c.c., and after the 2.6 c.c. dose, subsequent injections are given intravenously at half-hour intervals beginning with 0.1 c.c. and doubling the dose at each injection. These intravenous injections must be given very slowly, and if any untoward reaction develops, the injection must be discontinued for a few hours then resumed at the last dose. After 5 c.c. have been given the remainder of the serum may be slowly given at a single injection.

The danger of serum reactions is frequently offered as an excuse by those who do not believe in serum therapy. These reactions can now be largely avoided by observing the above precautions, by using the newer concentrated serums, by warming the serum to body temperature and by giving the initial injection very slowly (1.0 c.c. per minute), stopping at the first sign of a shock-like, asthmatic or urticarial reaction or a chill. A small syringe containing 1.0 c.c. of epinephrine (1:1000) should always be at hand, and this should be injected subcutaneously at once if any of these symptoms appear. In spite of this it must be admitted that our present methods of determining sensitivity are by no means perfect and, in very rare instances, unfavorable reactions cannot be avoided. Nor have we a way of preventing the late serum sickness, which, in a small percentage of cases, follows serum administration after a week or ten days. This occurs even with the newer concentrated serums. It is uncomfortable but entirely harmless. The use of antipneumococcus rabbit serum in patients sensitive to horse serum is now being investigated and offers considerable promise.

A very workable plan is an initial injection of 20,000 units, a second dose of 40,000 units four hours later and a third injection of 40,000 to 60,000 units from four to six hours later. No more serum is given if a crisis has been produced in the meantime. If the temperature rises again or is the first or a subsequently obtained blood culture is positive, more serum is given.

The matter of the expense of serum therapy is one that cannot be glossed over lightly. Many families cannot afford to pay the current rate of twelve dollars per vial (20,000 units) for several vials. The doctor may emphasize, for example, that in human life equivalents, and dollar for dollar, the money is just as well spent for serum as for a surgical operation such as an appendectomy. But it is unfortunately one of the frailties of the lay mind to put more value on the surgeon's than on the medical man's technic.

Type 3 Pneumonia and Sulfanilamide

In the last few years numerous reports have appeared of the efficacy of sulfanilamide in combating certain infections, particularly those due to the streptococcus. In view of the biologic similarity of the highly virulent Type 3 pneumococcus (formerly called streptococcus mocosus) to the streptococcus, it is not surprising that successes have been reported in treating Type 3 pneumonia with this drug. Although it is as yet too early for instances of untoward reaction or sensitivity to have caught up with the early successes that attend any new treatment, it is difficult to believe here that the remedy is worse than the disease. Because Type 3 pneumonia carries a very high mortality rate and because there is no effective antiserum for it, other than rabbit serum, it would seem that we should keep our minds open as to the possibilities of this drug.

Oxygen Therapy

While there is no doubt regarding the effect of oxygen in alleviating dyspnea, delirium, distention, and so forth in many cases with marked anoxemia, there is still some controversy as to the precise indications for and the value of such therapy. Opinions range from the extreme of using oxygen routinely from the onset of all pneumonias to that of using it almost as a last resort.

Excepting the oxygen chamber, the most comfortable but unfortunately most expensive common method of administering oxygen is the use of the oxygen tent. The new open-top tent is relatively inexpensive. If none is available, one can be improvised by the use of an open-top box provided with a rubber attachment to fit snugly around the patient's neck. The oxygen enters the box, first passing through a small chamber filled with ice. The latter humidifies the oxygen and cools it so that it is less liable to rise out of the box. Or resort may be had to the nasal catheter method of oxygen administration. A very workable set-up consists of an oxygen tank equipped with pressure gauges, two one-gallon bottles, a glass Y tube, two nasal catheters and enough rubber tubing to allow the patient to turn easily from side to side. This gas is conducted from the tank to a bent glass tube reaching to the bottom of the first bottle, which is filled with water. The flow should be adjusted so that there is just short of a continuous stream of bubbles. This humidifies the oxygen and makes it less irritating. The gas is then led through the second bottle which is empty. This rids the oxygen of any excess moisture and makes it impossible for any free liquid to enter the patient's lungs. The oxygen is then led into the catheters which are attached to the two ends of the glass Y tube. Each catheter is first lubricated with glycerine or albolene and passed back into the nasal cavity until its tip is just visible behind the soft palate. It is then withdrawn about half an inch. The catheters are kept in position by attaching them to the cheeks with adhesive tape.

If the oxygen is to be of value it must be given continuously. There is neither rhyme nor reason to the former practice of having the apparatus "on" for certain periods and "off" for others. When it is decided to discontinue oxygen it should, on theoretical grounds, be done gradually. Otherwise the abrupt change from a high oxygen tension (low altitude) to a low oxygen tension (high altitude) may produce a reaction resembling mountain sickness.

Speed advises the use of oxygen for high temperature, rapid pulse and increased respiration (which must mean for practically all cases of lobar pneumonia), while Mather's more precise indications are cyanosis of nail beds, a pulse rate over 120, a respiratory rate over 36 and the presence of delirium.

The face-mask funnel method of administering oxygen is inefficient. The recently introduced subcutaneous and intravenous methods of giving it are still very much in the experimental stage and cannot be recommended in general practice.

At best, oxygen therapy can be regarded as only a symptomatic form of treatment. There is no conclusive evidence that oxygen saves lives; there is abundant evidence that serum does. Hence we cannot logically recommend oxygen for poor patients. If money can be obtained by pooling family resources, this money should be spent on serum or nursing care.

TREATMENT OF CIRCULATORY FAILURE

By and large the circulatory failure which occurs in pneumonia is the result of peripheral vascular collapse rather than a primary heart failure, as was formerly supposed. As a result of the anoxemia and the severe toxemia the walls of the smaller blood vessels—arterioles, capillaries and venules—lose tone, and the vessels dilate. This, in turn, leads to a pooling of the blood in the peripheral part of the vascular system. There is an inadequate venous return to the heart, and a shock-like condition supervenes. The stagnation of blood in the small vessels accounts in part for the intense heliotrope or cyanotic color of the skin and the failure of color to return promptly to an area which has been blanched by pressure. In accordance with the Bainbridge reflex, the inadequate venous return is followed by an increase in the heart rate and a lowering of the blood pressure and of the pulse pressure. Other symptoms are extreme weakness and sweating. At first sight these signs and symptoms impress the observer as evidence of heart failure, but the rapid feeble heart is really the result of peripheral circulatory failure. By the same token treatment must be directed to the periphery of the circulatory system rather than to the heart. It aims to overcome the dilatation of the smaller blood vessels. It must be remembered that the atonic vessel wall, numbed by toxins and deprived of its normal quota of oxygen, responds to the therapeutic measures at hand much less readily than a normal vessel wall. Hence the results of treatment are often discouraging.

Oxygen therapy is claimed by some to be efficacious. Hydrotherapy, such as moderate cooling by an alcohol sponge, may produce vasoconstriction. "It is well known that local exposure of the skin to low temperature causes a definite paleness of the exposed skin and it can easily be verified microscopically that a contraction like of capillaries, venules and arterioles is involved in this reaction." Although the following drugs may be tried, it must be admitted that there is little evidence of their value. Epinephrine hydrochloride (1:1000) may be given subcutaneously in doses of 0.5 to 1 c.c. every three or four hours or by continuous intravenous infusion in doses of 1 c.c. to a liter of physiological salt solution or 5 per cent glucose. Ephedrine sulfate in doses of ⅜ to ¾ gr. may be given by mouth or subcutaneously every three or four hours. Pituitrin in doses of 1 c.c. every twelve hours has been recommended. This drug incidentally may have the additional beneficial action of helping to combat distention. Caffeine sodiobenzoate stimulates the vasomotor centers as well as the respiratory centers and hence may improve peripheral vascular tone by its central action. The dose is 7½ to 15 gr. subcutaneously, repeated every two hours if effective. The use of strychnine seems to be very extensive. The dose ordinarily used, 1/60 gr. by mouth, is probably no more effective than a placebo tablet. The dose should be 1/20 to 1/10 gr. hypodermically, repeated every three to six hours until results are obtained.

In the erroneous belief that primary heart failure is responsible for the symptoms, digitalis is often given. This may not only be necessary but actually injurious for it means another toxin with which the already intoxicated heart muscle has to deal. In fact there is evidence that in shock-like conditions (such as pneumonia), digitalis has the undesirable effect of diminishing the minute-volume output of the heart. This is in line with the clinical studies of Niles and Wyckoff which showed that the indiscriminate use of digitalis in lobar pneumonia consistently increased the mortality rate. The present procedure is to give digitalis only for its usual indications—frank congestive heart failure and auricular fibrillation or flutter, conditions in which the drug would be given, whether or not lobar pneumonia were present. If congestive failure is present it is due not to the pneumonia but to antecedent or co-existent heart disease. When digitalis is given it should be given in full digitalizing doses. Because of the unfounded fear of rapid digitalization, it must be stated that full digitalization may be safely carried out in the course of twenty-four hours. There seems to be no particular virtue in the practice of holding digitalis in reserve or as a measure of last resort. If the indication exists for its administration, the drug should be given immediately.

In children lobar pneumonia in most favorable series has carried as low as 2% mortality in uncomplicated cases. It is felt that the usual measures plus early transfusion if the blood count shows that the child is coming down with pneumonia while in an anemic state, plus oxygen for the same indications as in adults, offers the greatest hope of satisfactory outcome in childhood cases.

In THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Vol. 110, page 19, Powell has reported 104 cases of typed pneumonia treated by x-ray . . . using serum only in the type 1 cases. He reports a total 5% mortality and believes from a number of his cases that x-ray early shows definite ability to abort, or dramatically terminate a lobar pneumonia.

We have had no experience in this technique or results but feel that for pneumonia treated by hospitalization this possibility should be kept in mind and articles in the future on this point should be watched for. The one contraindication mentioned by Powell has been leukopenia, but we have, in general, found this an omen of poor results by any therapy.

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PNEUMONIA

TECHNIC OF SERUM ADMINISTRATION

There are many accepted technics of administration of antipneumococcus serum. The following is the technic used in the film, "The Technical Aspects of Intravenous Serum Therapy in Pneumonia, prepared by the Bureau of Pneumonia Control of the State Department of Health. It is recommended for its relative simplicity and practicability for use in the home.

I. **Equipment Necessary**

A. Tests for sensitivity to horse serum

1. Hypodermic syringe and long needle containing 1.0 c.c. of fresh epinephrine (adrenaline) 1:1000.
2. Small vial of normal serum diluted 1:10 (supplied with each vial of therapeutic serum).
3. Fresh, sterile physiological salt solution (may be obtained, upon request, with therapeutic serum).
4. Tuberculin syringe and short 26 or 27 guage needle.
5. 70% alcohol and sterile sponges for cleansing skin before test.

B. For serum administration

1. Fresh epinephrine solution in hypodermic syringe, as above.
2. Supply of concentrated antipneumococcus serum of type indicated.
3. Fresh, sterile physiological saline solution, as above.
4. One 25 c.c. Luer syringe (for blood culture or introducing needle).
5. One 10 c.c. or 20 c.c. (with adapter) or two 20 c.c. syringes with suitable needles (19 or 20 gauge).
7. Short length of rubber tubing (intravenous) with metal or glass adapters for syringe and needle.
8. Hot water bottle.
9. Tincture of iodine and 70% alcohol for sterilizing skin over antecubital space.
10. Sterile gauze sponges.
11. Small tourniquet.
12. Alcohol lamp, flask of sterile broth or culture tubes for blood culture.

II. **Serum Administration**

Tests for sensitivity to horse serum.

1. History for symptoms of allergy, with special reference to horse emanations, previous serum treatment or toxin antitoxin.
2. Intradermal tests.
   a. Make sure hypodermic syringe with epinephrine (1:1000) is at hand.
   b. Gently cleanse the flexor surface of the forearm with alcohol.
   c. Cleanse rubber top of serum vial with iodine and alcohol.
   d. Withdraw at least 0.6 c.c. of sterile physiological salt solution from vial into tuberculin syringe.
   e. Make "control test" intracutantaneously with 0.1 c.c. of salt solution in middle of forearm.
   f. Discharge all but 0.45 c.c. of salt solution from syringe a and draw up 0.05 c.c. of 1-10 normal horse serum. Mix thoroughly by working plunger back and forth a number of times. This makes approximately a 1:100 dilution of normal horse serum.
   g. Inject, intracutaneously, 0.1 c.c. of the diluted (1:100) horse serum, making small intracutaneous bleb proximal to control test.
   h. Have patient watched for 15 to 20 minutes to prevent rubbing of arm. Read test.
   i. If the history is negative and the skin test shows no wheal and erythema reaction, proceed with initial serum injection. (The treatment of sensitive patients is not within the scope of this outline.)

B. Initial serum injection ("Test Dose")

1. Warm the vial of serum and of physiological salt solution to approximately body temperature in a dish of water while waiting to interpret skin tests. Overheating will cause coagulation of the serum proteins.
2. Make sure hypodermic syringe with epinephrine solution is at hand.
3. Select a good vein and clean antecubital space with iodine and alcohol.
4. The hands should be scrubbed thoroughly and thereafter aseptic technic should be maintained insofar as possible.

5. Attach 20 gauge needles to both the 10 c.c. and the 20 c.c. syringes.
6. Withdraw the 10 c.c. of warm sterile physiological salt solution into the 20 cc. syringe. Then add 1.0 c.c. of concentrated antiserum. (The salt solution should be taken up first to prevent any possible coagulation of globulins in the syringe). Mix thoroughly and set aside where it may be kept sterile and warm.
7. Take the 10 c.c. syringe with needle attached and after again checking readings of skin tests, apply tourniquet and insert needle well into vein. Withdraw about 5 to 10 c.c. of blood for culture. Release tourniquet, place sterile sponge under the hub of the needle, and detach syringe, leaving the needle in place in the vein.
8. Flame the mouth of the broth container and add the blood to the culture medium.
9. Attach syringe containing diluted therapeutic serum, having first removed needle through which serum was withdrawn from the vial, and having expelled the air bubbles. Inject first dose **very slowly,** pausing at frequent intervals. Observe the conditions of the patient and keep a constant watch of the pulse rate (a rapid increase may mean impending reaction). The injection of this initial test dose should consume about 10 minutes.
10. At conclusion of initial injection, observe the patient for one-half hour before proceeding with therapeutic dose.

C. First therapeutic dose.

1. Consists of approximately 50,000 units.
2. This dose and subsequent doses may be given in concentrated form or diluted in any desired quantity of fresh physiological salt solution suitable for intravenous use. (Large volume administrations are probably inadvisable in patients over 50 years of age or in those who have poor cardiac reserve).

   The serum must be kept warm (approximately body temperature) throughout administration and must be injected very slowly, particularly at first, at a rate not exceeding about 0.1 c.c. per minute.
3. If one large syringe (50 c.c.) is used it will be found convenient to use a short sterile rubber tube especially prepared for intravenous use, connecting the syringe and needle. This will allow the syringe to be placed on a hot water bottle beside the patient's arm for the purpose of keeping the serum warm. If such tubing is used, it (as well as the syringe) should first be rinsed with sterile salt solution before filling with serum. All air should be expelled from syringe and tubing before attaching to the needle in the vein.

D. Subsequent therapeutic doses.

1. Subsequent doses of serum should consist of approximately 50,000 units each injected at two- to four-hour intervals until the desired therapeutic effect has been obtained. There is, however, probably no value in the use of amounts in excess of 200,000 units, with the possible exception of type II cases, bacteremic cases and cases treated very late, in which larger doses may be of value.

E. Resumption of serum therapy after a prolonged interval.

1. Resumption of serum therapy after an interval of over three days is hazardous and should only be undertaken with great caution. After any interval in excess of 24 to 36 hours, it is probably wise to repeat the tests for sensitivity before proceeding.

III. **Case Report**

A. At the termination of the illness, a report form (provided in the package with serum), should be filled out and sent to the Division of Laboratories and Research, as directed.

P.C.3.

Issued by
Bureau of Pneumonia Control
Division of Communicable Diseases
New York State Department of Health
Albany, New York

Neuro-Psychiatry In General Practice

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MANY PHYSICIANS consider mental diseases difficult to understand. A little study will provide a satisfactory working basis. This paper is written to simplify the subject which I like to divide into five main groups:

I. ORGANIC: Central nervous system lesions are usually associated with some mental disturbance. This varies from a scarcely perceptable change in character to the grandiosity of the paretic. Disturbances of reflex, muscle paralysis, or sensory disturbance may be present. Loss of sphincter control may be due to indifference or paralysis. Memory defect or definite loss of intellectual faculty may occur. Convulsive phenomena may simulate epilepsy or hysteria.

Gait disturbance; sluggish, unequal, or irregular pupils; deviation of the tongue may be observed. Facial paralysis may be observed when he smiles or shows his teeth. Slurring of speech and difficulty in swallowing may occur. These the alert physician observes. Motor or sensory disturbance means organic disease.

No physical examination is complete without a blood Wassermann test, no neurological examination is complete without spinal puncture. Spinal fluid Wassermann examination may be positive when the blood Wassermann is not. A latent reaction may become positive after provocative treatment.

If diagnosis is made early, syphilitic disease of the nervous system can be arrested if not cured. A boy with paresis that I treated later graduated from high school.

Some brain tumors are amenable to operation; all others progress. First, they must be recognized. Vascular disease of the brain is discouraging. Some hematomas, however, are being removed with recovery. Encephalitis and poliomyelitis leave distressing sequellae. The choreas, hereditary ataxias, etc., are comparatively rare.

II. TOXIC CONDITIONS: These include all mental disturbance of toxic origin arising from within and without the body. The associated mental phenomena vary from delirium to the more or less systematized delusional trends seen in some cardio-renal patients. A pneumonia patient may try to jump out of the window, a pellagrin may imagine he is to be burned alive. I once saw a man suffering from bromide intoxication try to light a cigarette from an electric light bulb.

Catatonic-like states may develop in young people following a supposed attack of influenza. They show considerable excitement together with symptoms usually regarded as belonging to schizophrenia. Very mild encephalitis must be considered in differential diagnosis.

I have seen patients in a state hospital recover following extraction of impacted teeth; following treatment for hookworm infestation; following treatment for thyroid intoxication. Likewise I have seen several patients sent to the asylum delirious from pneumonia.

I believe that pellagrinous insanity is toxic in the broad sense of the word. Mental health follows the return of physical health. The typical picture is a fear reaction with some degree of mental confusion. Any form of delusion or hallucination may occur. Those with other forms of mental disease may also develop pellagra through their failure to eat or assimilate the food they do eat. In these, curing the pellagra does not cure the psychosis.

III. PURE PSYCHOSES: These are: (a.) Manic depressive group, including involution melancholia; (b) schizophrenia and paranoid conditions.

Until organic and toxic causes have been eliminated, I do not diagnose patients under these headings. The manic-depressive usually recovers from his attack of depression or excitement although he may go through either or both stages one or more times. Recurrences are frequent.

The term schizophrenia is superceding the term dementia praecox because not all cases develop precociously nor do they all dement. Schizophrenia means splitting of the mind and is more descriptive. Schizophrenia has a grave prognosis. Except for the catatonic group, very few recover although you do have periods of apparent latency during which the patient may more or less successfully conceal his delusions. The new "shock treatment" with insulin or metrazol offers promise if tried early. Three years after onset practically no cures result. The catatonic group responds best. This is not a procedure for the general practitioner.

It is much better to call a patient schizophrenic and give treatment that may cause recovery than to use such terms as nervous breakdown and delay until it is too late for cure.

The manic-depressives are best known for their excitements and depressions. The schizophrenics may be hallucinated and show marked delusional trends. Books on descriptive clinical psychiatry such as those by Noyes or Strecker give detailed descriptions of these conditions. Every physician needs one.

IV. Psychoneuroses: Delusions and hallucinations are not such an important feature of neuraesthenia, psychaesthenia or hysteria, although phobias and obsessions are. Hysteria may simulate any condition. In accident work especially it must be kept in mind. Hysterical paralysis may cause permanent contractures from non-use. Hysterical seizures and convulsions are even more frequent in the Negro than in the white.

Psychoneurotics require much attention. With them, the physician must be friend, counsellor and confessor if he hopes for results. The symptoms form an escape from something unpleasant. A family fuss or an unpleasant task may be the immediate cause of the attack. Do not expect surgery to cure neuraesthenia. Neither should you too lightly dismiss a patient saying, "She is just neurotic" until repeated examination assures you that a physical cause is not present. Even then take the view that perhaps you have only failed to find the cause, but do not subject her to surgical experimentation.

V. Constitutional States: These may be with or without psychosis, and include epilepsy, mental deficiency and psychopathic personality. Perhaps drug and alcoholic addicts belong in this group. "Peeping Toms" and many sex abnormals belong here. Frequently, although legally sane, they are so abnormal as to constitute a menace to society. Treatment is futile unless started early. Unless insane, the asylum cannot take them. Until an overt act is committed the penitentiary cannot. The family physician seess them first and by his advice in many cases may perhaps prevent their later becoming a menace. The larger cities now have child guidance clinics.

The epileptic by the judicious use of phenobarbital, bromides and diet may often so control the paroxysms as to be socially useful. The feebleminded can frequently be trained to become self-supporting. Where also insane, institutional care is necessary.

General Discussion: The physician wants to know three things: What is wrong with the patient? Can he be treated at home? What will be the outcome? The first requirement is the most complete physical examination possible. Syphilis must always be ruled out, bearing in mind that syphilis may be present and yet not be the cause.

Paresis calls for hyperpyrexia in conjunction with anti-syphilitic drugs. If the patient can be satisfactorily innoculated, I still prefer malaria. The arsphenamines should not be the first drugs used as they may aggravate the mental condition.

Phenobarbital should never be suddenly discontinued in an epileptic lest status epilepticus ensues. Benzedrine sulphate in narcolepsy and post-encephalitic states, nicotinic acid in pellagra. Glutamic acid in myaesthenia Gravis are worthwhile and offer hope that other drugs may be developed for use in other conditions now considered helpless.

Orthopedic correction of deformity may enable the poliomyelitis patient to become useful and thus overcome his morbidness and introspection. The neuro-surgeon can help certain cases of traumatic brain injury. Every person that well off the bed as a baby and later developed mental disease is not a subject for brain surgery, however.

Hydrotherapy will usually give as much or more sedation than drugs with no after-effects. Nervous or exhausted patients require rest which includes sleep, a quiet environment and protection from oversolicitous friends and relatives. Those with suicidal ideas must never be left alone. A feeling of unworthiness may lead to suicide. Those with delusions of infidelity or of persecution are institutional cases if tragedy would be averted. A delusion is always true to the patient and he will act on it as if it were true in fact.

After serving as the only physician on over one hundred lunacy juries, I find that those the most potentially dangerous are the most difficult to commit. Frequent comments are: "Why, he knows everybody," or "He remembers things real well, he can't be crazy." Hallucinated patients are always dangerous.

CONCLUSION: Treatment of mental conditions is not confined to the trained psychiatrist. They are seen first by the general practitioner who by early diagnosis, involving a complete and careful examination, will detect many in a stage where cure is possible and tragedy may be averted. Where delusions or hallucinations are present, the danger to others must be considered carefully.

The Common Skin Diseases of Infancy and Childhood*

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IN A DISCUSSION of this subject in a limited time one must necessarily omit a number of interesting conditions which are met with infrequently and which are usually referred to the dermatologist for diagnosis and treatment. I shall, therefore, limit this paper to a consideration of those conditions seen in everyday practice.

PYOGENIC DISEASES

1. IMPETIGO CONTAGIOSA: Impetigo is caused by staphylococcus or streptococcus and is probably seen in this section more frequently than any other skin condition. The lesion is characteristic beginning with a variable-sized pinkish macule which within a few hours forms a clear vesicle which in turn becomes purulent forming yellowish crusts. On removal a smooth, red, superficial lesion remains which if uncomplicated by scratching or other trauma, heals rapidly. The material from any lesion is very infectious, and the disease spreads very rapidly to contiguous areas. Initial lesions appearing in the scalp and in the folds of the skin, as the neck, axilla, or groin, are difficult to control. If the proper treatment is instituted early, the lesions heal quickly without scarring. If traumatized by scratching or otherwise, the deeper layers of the skin become involved with a slowly healing ulcer.

In the treatment of impetigo many satisfactory therapeutic measures have been proposed. Ointment of ammoniated mercury to loosen and remove the crusts followed by tincture of merthiolate, tincture of metaphen or alcoholic solution of gentian violet will usually prove satisfactory. Great care must be taken to disinfect clothing, bedding, toys, etc., in order that recurrence may be avoided.

Impetigo of the newborn deserves especial attention in that it spreads more rapidly, and the consequences are more pronounced in the newborn than in older children. A great variety of methods in managing the newborn to prevent pyogenic eruptions have been proposed. These range from doing nothing at all except to dress the newborn, without removing the vermix, in clean soft linen to the elaborate cleansing and daily application of antiseptic oils or ointments. The technique advocated by Dr. W. F. Patrick, Portland, Oregon, should be described. The baby is simply not cleaned at birth. The excess blood is wiped off, but that is all. Warm water is used to clean the buttocks following bowel movements. Clothing is changed each day, and after twelve to twenty-four hours the infant's skin looks perfectly clean and normal. The method should certainly commend itself to those patients whose hygienic surroundings are such that bathing and handling offer additional hazards of infection.

In this connection reference may be made to a paper by Dr. M. L. Spivek of Chicago appearing in a recent issue of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION in which he questions in a general way the present day newborn nursery practice. In hospital obstetrics the care of the newborn is becoming an increasingly difficult problem. There are constantly cropping up reports of serious respiratory infections, diarrhoeal infections, as well as skin infections. And these are occurring in that part of the hospital that above all others should be free of such outbreaks. Many remedies have been suggested. Among these might be mentioned the proposal that individual nursery rooms be included with the mother's rooms; also that the mother be delivered and dismissed with her baby from the hospital within forty-eight hours. Really we can hardly expect ten to fifteen infants to be safely housed in one small room no larger than the average one-bed hospital room.

2. ACNE VULGARIS is a chronic inflammatory disorder of the pilo-sebaceous follicles characterized by comedones, papules, pustules, cysts, and nodules. It occurs about puberty, is seen more frequently in boys, and is believed by competent observers to be due to endocrine unbalance. However, no glandular secretion has been found which will benefit the

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*Read before the 28th semi-annual meeting of the Delta Medical Society, Indianola, Miss., Oct. 12, 1938.

majority of cases. Although the condition usually clears up spontaneously after a chronic course of one to several years without serious consequences, occurring as it does at the most sensitive period of youth, every effort should be made to relieve these patients of the embarassing blemishes which mar their personal appearance. Much can be done by local treatment to alleviate the symptoms. The purpose of local treatment is two-fold—cleanliness and drying and peeling of the skin. Soap and water three times a day with a wash cloth and ultra-violet light once a week is an excellent treatment. Lotio alba or a peeling cream of salicylic acid and sulfur applied at night and calamine lotion in the daytime are good. If the skin becomes too dry and rough, a soothing ointment should be alternated with the peeling preparations.

In severe cases divided doses of x-ray prove beneficial when all other forms of therapy have failed. An excess of carbohydrates in the diet should be forbidden. Boils frequently complicate acne and of course may occur independently. Autogenous vaccine administered in small doses on alternate days will usually clear up boils and prevent their recurrence.

FUNGUS DISEASES

1. Tinea Circinata is the familiar ringworm seen in children. It occurs in scaly patches more or less circular and characterized by central clearing and peripheral vesicultation with crusting. An excellent remedy is 4% alcoholic solution of gentian violet, iodine in oil (iocampen) or 10% ammoniated mercury ointment. Caution against the use of ammoniated mercury ointment before the last trace of iodine is removed should be given.

2. Tinea Capitis or ringworm of the scalp is recognized by circular areas of small pustules or crusts. The hair is broken off at the surface of the scalp presenting a more or less bald area. The treatment is more difficult in that epilation is often required before cure may be effected. This may be done with x-ray, but it should be in the hands of an experienced operator, otherwise permanent baldness may result. Epilation may be effected with thalium acetate. This also is not without danger. I have had some success with ointment of merthiolate applied generously and kept in place with a skull cap. Ammoniated mercury ointment applied in the same manner is effective. In private practice epilation should not be resorted to unless absolutely necessary.

SCABIES

The diagnosis is usually established by the small papular, vesicular lesions usually distributed over the chest, abdomen, buttocks and on the webs of the fingers. The itching is out of all proportion to the apparent severity of the lesions and is more pronounced at night than in the daytime. It occurs much more frequently during the winter months and among school children in the lower grades. The treatment of this condition depends upon the application of sulfur and alleviation of the secondary dermatitis. One must remember that some individuals are sensitive to sulfur and for these a weak ointment should be used, 2% to 5%—on others, a 10% or 15% ointment may be used. The usual procedure is a hot bath every night making a thick lather all over the skin and using a wash cloth to break open the vesicles and remove the crusts. Then a 5% sulfur and balsam peru ointment is rubbed gently over the entire body. The patient may be permitted to wear the same underclothes and sleeping garments and use the same bed linen for four or five days, after which a thorough bath is given and clothing and bed linen changed. Especial attention should be given to woolen blankets. These should be sterilized, otherwise a recurrence may be expected .

POISON IVY

You are all familiar with the manifestation of poison ivy. Superficial vesicles, scratch marks, oedema, and marked itching. Most children who are sensitive to poison ivy are aware of the fact from former experiences. After an exposure or in the very beginning of an attack thorough washing with soap and water followed by an alcoholic rub will often completely protect the patient. However, it is useless after the dermatitis develops.

As soon as the attack is established, one may use any one of the various lotions to prevent itching and to precipitate the oil, preventing further spread. Mulford's ivyol intramuscularly is beneficial.

DRUG RASHES

One must remember that numerous drugs may produce skin eruptions, and unless one keeps this in mind, difficulties in diagnosis may arise. Among the ones more frequently encountered in children may be mentioned quinine, phenobarbital, phenolphthalein, and arsenic.

Is Alcohol A Food? Or Should It Ever Be Used As A Medicine?

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I THINK THAT all therapeutic writers would agree upon the following statement copied from Potter's MATERIA MEDICA published in 1913, towit: "The effects of large doses (of alcohol) are very injurious: the vaso-motor nerves are partially paralized for a time, causing dilatation of the arterioles thruout the body; the pepsin of the gastric juice is precipitated, the gastric and hepatic vessels are congested, the walls of the stomach are rendered hyperemic and the gastric glands and the hepati cells are over-stimulated to the production of pathological secretions. If the ingestion is continued, even in moderate quantities frequently repeated, chronic gastritis ensues, gastric mucous is poured out in large amount, the gastric glands soon atrophy, and the permanent dyspepsia of drunkards is set up with morning vomiting of glairy mucous. The further effects of large doses are the total arrest of digestion, the production of intoxication, perhaps hallucinations and delirium, also great inco-ordination of thought and motion, depressed sensibility, depression of the heart and respiration, lowered arterial tension and body temperature, abolished reflexes, stupor, and, if the dose be sufficient, coma and death."

As remarked above, I think that all therapeutic writers agree upon the above quotation as to large doses of alcohol. But older, and the more recent scientists differ upon the effects of small doses of alcohol given as a food or as a medicine. So we need not consider the effects of alcohol taken in large doses any further; but we may think further of the effects of alcohol given in small doses. (I might stop to remark that whisky, brandy, wine, beer, and other such beverages are taken only for the effects of the alcohol that is in them.)

The same authority quoted above, in speaking of the various beverages containing alcohol, says they all lower the body temperature. He also says that the symptoms produced by alcohol are divided into stages as follows:

(A) Stimulant (B) Anodyne and anesthetic (C) Paralytic. But authorities differ as to whether alcohol ever acts as a stimulant.

Hare's PRACTICAL THERAPEUTICS, published in 1925, twelve years later than the above quoted authority, says "Careful scientific research has proved that alcohol is in no sense a true stimulant to the circulation, in healthy persons. If the dose is large enough to cause any appreciable change in the activity of circulation, it is in the nature of depression rather than stimulation. This is true in the laboratory and at the bedside. In other words it does not affect all the blood vessels in a similar manner, for while the cutaneous vessels are dilated, those of the muscles are contracted, as are also those of the splanchnic area. Respiration is not materially affected by alcohol. Alcohol never increases the number of heat units in the body, for, though in its oxidation more heat is made than when no alcohol is used, the increased radiation from the skin and lungs under its influence more than counterbalances the gain caused by the drug.

By its irritating effect on the mucous membrane of the mouth and stomach, it produces a sensation of warmth and warms the extremities at the expense of the body by increasing the circulation of the blood in those parts. If it be used to excess, the temperature rapidly falls, owing to the increase of heat-radiation produced by the free distribution of blood as has just been described, and, secondly, by the depression of the vital forces."

At another place, this same author says, "In moderate amount, when taken by a person who is unduly fatigued by some mental or physical toil, it overcomes nervous irritability, and by giving energy, enables him to digest and assimilate his food." I quote the last paragraph simply to show how contradictory a man can be in his statements about the use of alcohol when he just wants to use it anyhow.

If alcohol lowers the temperature by causing the heat of the body to be radiated from the surface of the body faster than it is generated by oxidation in the body, then, although a small amount of alcohol may be oxidized in the body as food is, the result of this oxidation does not have the effect of a true food.

On the other hand, if we should grant that alcohol is a true stimulant, we have other substances that will stimulate much better than alcohol will, and there is not so much danger lurking in the use of these other substances, as there is in the advice of a doctor to a patient to use alcohol. Also, if we should grant that alcohol acts as a food, there are many things used as food that are more nourishing than alcohol, and that are many times less dangerous than alcohol, or the advice of a doctor who tells a patient that he needs alcohol for his body.

There are nerves that go to the heart that have opposite effects on the heart—the one stimulates the heart to make it go faster; the other inhibits the heart to keep it from going too fast. If a substance is taken into the body that will stimulate the inhibitor nerve that goes to the heart, that substance will cause the heart to beat more slowly. On the other hand, if a substance is taken into the body that will depress the inhibitor nerve to the heart, this will slacken the check rein on the heart and allow the nerve that stimulates it to exercise its stimulating effect more easily, causing the heart to beat more rapidly and thus wear it out more quickly.

Allow me to give a simple illustration of this matter. Suppose a man is driving a horse to a cart. The man holds check reins in one hand to keep the horse back. There would possibly be a catastrophe that would do the horse a great deal of harm, and cause some excitement among the on-lookers.

And this is similar to what takes place in the human body when a person takes alcohol to stimulate him.

I have already quoted Potter as saying that all the alcoholic drinks lower the body temperature. Hare's THERAPEUTICS explained that this effect is caused by the effect of alcohol in causing the contraction of the deep blood vessels to the muscles and the dilatation of the surface vessels, thus allowing the heat to radiate from the surface and reduce the temperature of the body. Then we may say that even though a small amount of alcohol taken into the body is oxidized like a true food; but that alcohol, in any amount, taken into the body produces a deleterious effect. I can not understand why alcohol could do good to the aged and decrepid, as some would argue, when it could not do good to any other person.

It is also argued that when an old sot comes down with a wasting disease, it would be beneficial to him to dose him with alcohol. But I am wondering if the same kind of reasoning would be true with an old person that has used profanity all his life, that is, should we try to relieve his symptoms by ordering him to curse and swear a little.

I should like to add the following quotation from Hare's THERAPEUTICS. "Alcohol never acts as a true stimulant to the brain, the spinal cord or the nerves. The increased activity of thought and speech after its use is not due to stimulation but to depression of the inhibitory nervous apparatus. The activity is therefore that caused by a lack of control, and is not a real increase in energy. So far as the brain is concerned, it does not increase the vigor of thought nor its depth, nor does it enable a man to work out a problem which is difficult. On the contrary, it rather benumbs the activity or mental processes. The effect of moderate doses differs from the large ones in degree, and not in kind."

In consideration of all the facts stated above, can we say that alcohol can be considered either as a food or as a medicine?

Calcium Therapy In Diseases Of The Nervous System

By Edward Podolsky, M. D.
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In 1901 Sabbatini suggested that there was an antagonism between the action of calcium and sodium salts in the body. He found that when a calcium solution was applied to the surface of the brain it had the effect of reducing the excitability of that organ. But on the other hand, when a sodium solution which precipitated the calcium was injected into the blood stream of animals these animals showed marked excitability Based on these observations Sabbatini suggested that it was the lack of calcium in the system which was responsible for certain kinds of nervous hyperexcitability.

In 1909 McCallum and Voegtlie' performed a series of experiments in which they demonstrated the relationship existing between calcium mobilization parathyroidectomy and convulsion seizures. Later it was observed that there is a close similarity of the symptoms and behavior of animals during calcium starvation to some of the symptoms presented by patients suffering from less severe functional disorders.

Further thought to this problem by investigators, among them Gault, led to the opinion that the symptoms presented by such patients might be the expression of a disturbed kationic ratio with its resulting effect on general cellular irritability, and more particularly of lowered calcium retention, and that calcium feeding in these cases might be productive of some interesting results. Gault placed 18 such patients on prolonged calcium administration, lasting from 3 to 6 months. Within 24 to 48 hours the majority of Gault's patients experienced a feeling of well-being, the nervousness and apprehension disappearing, and the feeling of fatigue so commonly complained of being replaced by a feeling of physical well-being.

Similar experiences were reported by Steger with calcium therapy in the treatment of slight neurosis. His patients presented all the well known symptoms of the neurotic; insomnia, vasomotor hyperirritability, heart palpitation, parasthenias, tendency to profuse sweating. Steger obtained alleviations of these symptoms through intramuscular injections of calcium.

Many individuals of extremely neurotic temperament are subjected to the so-called nervous headache. In some patients of this class a tendency to recurrent attacks of Quincke's edema suggest that the headache might be due to the intracranial extension of the process. This is Foster Kennedy's conception. A familial predisposition is quite often found in these cases. Basstrup ascertained that such patients often presented a calciprivia and for this reason advocated calcium therapy for this condition. He gave his patients calcium lactate I gm. one to three times a day for an average of three weeks and then with longer intervals for ten days. The results obtained from this mode of therapy were gratifying.

Similar good results were obtained by Bigland in migraine. Of particular interest is the fact that he used calcium with success in aborting the attack. At the first signs of approach of an attack as evidenced by ocular aura 30 grams of calcium were given immediately and continued for several hours.

According to the hypothesis of Begaard and his co-workers the disturbances of metabolism in epilepsy (dysregulatic ammoniemia) is more or less connected with a functional disturbance of the parathyroid glands. There are many points of clinical and chemico-physical resemblance in parathyroid individuals tetanics and epileptics. Experiments have shown that injections of parathyroid extract changes a dysregulator into an orthyregulator. Although the whole mechanism is intimately bound up with calcium metabolism calcium alone is not effective in bringing this about.

Muscular dystrophy and myotonia are frequently found in connection with low calcium values. Funston in a series of thirty cases of muscular dystrophy used all the forms of medication recommended but without any appreciative effect. He finally resorted to calcium lactate feeding with distinct benefit in the majority of his cases. Myotonia usually comes serum calcium according to Rosenbloom and Cohoe. They found that in familia myotonia reduced blood calcium in all persons of the family affected. Kiely affirmed this finding in patients of his own. He started his patients on calcium lactate, 0:325 gm. three times a day. Within four months all electrical reactions were normal. A re-examination of his blood showed normal calcium values.

Certain forms of urinary incontinence have as the underlying pathology hyperexcitability of the vague. Alektroff in several cases of vagotonia with urinary incontinence which would not yield to ordinary measures obtained good results with intravenous injections of an 8 per cent solution of calcium lactate in from 5 to 10cc doses, these doses being given a day apart. After three months the majority of his patients showed a remarkable improvement with a small group entirely recovered.

Time has made a special study of lowered calcium utilization and its relation to behavior disturbances. These disturbances varied from mild irritation through the various grades of incorrigibility and assultiveness to hypomanic outbursts with homicidal attempts. The blood calcium findings in cases of this kind are quite below the normal value, being usually between 5 and 7 gm. per 100cc of whole blood. Timme's treatment consisted of injections of the parathyroid hormone of Collip and oral administration of calcium lactate with definite improvement in the condition of his patients. With the raising of the calcium level the anonialous behavioristic tendencies of the patient vanished.

Fauser has also made some interesting studies on the relationship which exists between clacium metabolism and disturbed personality. He has raised the hypothesis that a number of psychopathological symptoms such as disturbance of motility, sensibility, thermosensibility, sleep and a variety are due to osmotic and ionic imbalances of the body. Fauser treated 24 cases of schizophrenia with calcium therapy. Sixteen of these cases were catatonic, six paranoid catatonic and two were of the hebephrenic type.

The mode of treatment consisted of intravenous injections every other day of 10cc of a 10 per cent calcium gluconate solution. Ten to twenty injections or more were given in every case, and a total of more than 600 injections or more were given. In a few of the patients additional doses were given orally. Notable improvement was observed in 18 of the 24 cases. Considerable improvement in motor and psychical manifestations and in behaviorism was noted in 12 of the 16 patients of the catatonic type, in 2 of the 6 of the paranoid catatonic type, and in 2 hebe-phremics treated. Two catatonics and four paranoid catatonics remained unimproved.

Certain vague upsets of the nervous system quite frequently have as their underlying basis a disturbed calcium metabolism. Several years ago Corlette stated that calcium and phosphorus deficiency was capable of causing a nervous disorder closely resembling that produced by a deficiency of vitiman B. It is implicated in any morbid condition of man in which nervous symptoms often occur. Among these are dysphrenia, earth eating, spasticity paraplegia, etc. Calcium therapy in supplying the naturally lacking calcium proves effective in overcoming these symptoms.

Another observer, De Lanfen, more than ten years ago noted a peculiar nervous manifestation of vague symptomatology in Europeans residing in tropical lowlands in which the temperature keeps slightly above normal without any appreciable cause. Those who are aware of this abnormal condition are liable to dwell upon it and begin to feel ill. If not, they may keep in good condition and sooner or later the condition subsides to normal range. If the daily variations are greater, there is liable to be subjective malaise.

De Lanfen ascribed this temperature disturbance to an exaggerated activity of the nervous system, which he found commonly in the tropics. He found that the calcium salts, which have a sedative action on the sympathetic nervous system was of value in the treatment in cases of this kind. A course of treatment with calcium chloride combined with Fowler's solution supplemented with food containing calcium was found to be effective. In some cases the calcium had to be kept up indefinitely; in others one or two months was sufficient.

The relationship between calcium metabolism and certain forms of nervous derangement seems to be rather definitely established. Calcuim treatment in appropriate conditions is productive of some very interesting results.

The Apparent Need For More Adequate Medical and Hospital Care*

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IT IS VARIOUSLY estimated that four million people are ill today. As physicians we have a definite responsibility for the health of the citizens of the country.

What are the facts regarding the responsibility for illness and for its treatment when it does strike? Much of our sickness is due to coming into contact with the general public, and therefore the general public might be considered responsible. Therefore, the general public might in all fairness bear the expense of illness when the individual honestly cannot pay.

A man may be entirely self-supporting so far as furnishing himself and his family with food, shelter and clothing, and yet he may be unable to provide needed medical care for catastrophic illness.

Until management of capital and industry can pay a good wage, they will face the necessity of some form of taxation upon themselves and society as a whole, to defray the expenses of the care of indigency as relates to food, shelter, clothing and medical care.

Workers who are unfortunate enough to be without jobs are under the additional handicap of having proportionately more illnesses than workers who have jobs. That illness is an important reason for loss of jobs is commonly recognized. It is also true that unemployment may result in illness. But even when unemployment does not result in privation, the change in pace, mental and physical, induced by such a state, as well as fears for the future, may have serious health consequences.

Sickness is among the most important causes of social and economic insecurity. Health insurance does not offer a satisfactory solution. From the economic standpoint, health insurance is a means of financing medical care, by which people pay a regular amount into a central fund—voluntary or governmental—from which the costs of sickness are met. Hospital insurance may lessen the burden but cannot be considered adequate since very often the provision is not made for medical fees.

Hospitals are not available in all communities and where they are near, the expense is prohibitive to those in ordinary circumstances, much less to the poor. The present lack of system in giving hospital care degrades the service.

The whole effort for human betterment has been handicapped because in this nation, medicine has not been and is not now a vital force in the councils of government. Through the integration and union of needed preventive and curative medical efforts and through the provision of public medical care, as a matter of right and not of charity for those in need of it, medicine can assume its rightful position of leadership in humanizing society.

The need for better maternal and child health care may easily be seen. The health and security of children depend to a great extent on the life and health of the mother and on the ability of the family to provide adequate food, shelter, clothing and medical care.

In childhood, excluding the first year of life, the probability of dying is lower than at any subsequent age period in the entire life span. Many lives can be saved by the application of specific measures for the control of communicable disease, for the protection of the milk supply and for adequate health supervision.

Our present lack of good obstetrical service results in an excessive mortality rate of women in childbirth. From best available evidence, this death rate can be reduced by two-thirds if adequate care were available and were utilized by every pregnant woman.

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*Delivered at the Conference of Presidents, Presidents-elect, Secretaries and Editors of the State Medical Associations, Southern Medical Association, Oklahoma City, Okla., Nov. 15, 1938.

During the past fifteen years, public health activities have increased greatly. Facilities for public medical care have increased even more, yet this growth has been haphazard and unco-ordinated, and fails to meet current needs.

The essential lack with regard to prevention of disease and death, is not in inadequate knowledge, but in inadequate funds.

Recent complications show that there are states in which almost no systematic provision for general medical care is made.

The enjoyment of health, immunity from disease and suffering, and long life, are the greatest temporal blessings that man can receive.

Interested physicians of this nation are entirely justified in view of the facts, not only to be concerned, but also to see to it that something is done now about more adequate medical and hospital care of those citizens of our country who are unable to secure these necessities for themselves.

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Pentothal Sodium As An Intravenous Anesthetic*

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THIS PAPER is a review of the clinical results obtained in over 20,000 cases in which sodium pentothal was used as an intravenous anesthetic. I chose this subject because I worked in a hospital in which this type anesthetic was used routinely in certain types of cases, also because this type anesthetic is seldom used in this local area. I have reviewed the papers from issues of *The American Journal of Surgery* of 1938, *The Lancet* of 1937, *South West Medicine* of 1937, *Surgery, Gynecology and Obstetrics* of 1937 and several others.

All anesthetics must be considered potentially dangerous to life. The administration of an anesthetic is an exacting procedure as it is usually given to its physiologic limit, while the patient's condition is watched closely to avoid a lethal effect; and only by approaching this limit can the surgeon proceed with an operation with a degree of safety and comfort for the patient.

Sodium pentothal was introduced clinically in 1934 by Lundy. It is the same as nembutal except that one oxygen is replaced by one sulphur. It is supplied in a yellow crystalline form in ampules, each containing one gram, to be dissolved in 20 c.c. of triple distilled water just before using. Solutions are not safe or stable for longer than three hours.

For short operations, no preliminary medication is necessary, and the patient generally awakes before he leaves the operating room. But for longer operations and for major surgery it is advisable to give a preliminary medication. There is a slight difference of opinion as to which drug to use. Some use morphine and atrophine, others use morphine with nembutal, while some use scopolamine with morphine. The dose should be given about an hour before the patient is taken to the operating room. By using these drugs the amount of sodium pentothal needed is decreased.

Before the anesthetic is administered the patient is placed on the operating table, the field of operation prepared and the patient properly draped. One of the arms is left out for the administration of the anesthetic. This procedure lessens the time in the operating room about 50%.

Intravenous anesthetics should be administered on the same principles as inhalation anesthetics and not according to the patient's weight, age, or size. It must be emphasized that sodium pentothal is not a drug with which liberties may be taken. The solution is injected at a rate not to exceed one c.c. in fifteen seconds. The patient is instructed to count slowly. The average adult will stop counting somewhere between seven and fifteen. Having the patient count indicates when he goes to sleep and gives an idea of his tolerance to the drug. Usually 2 or 3 c.c. will give surgical anesthesia. After the initial injection of 2 to 3 c.c. there should be a pause of 45 seconds to allow for the maximum effects of the drug. The drug is so rapidly destroyed within the body that intermittent administration throughout the operation permits control of the depth of anesthesia comparable to that obtained when ether is administered by the semi-drop method. The needle is maintained in the vein and subsequent small doses of one-half to one c.c. may be administered as the anesthesia becomes lighter.

With the careful administration of pentothal, loss of consciousness is peaceful, pleasant and rapid, most patients going to sleep without yawning. From a pychological standpoint a slight prick in the arm followed quickly by an almost instantaneous loss of consciousness, is preferable to the suffocating sensation of gas or the sickly smell of the volatile agents. With surgical anesthesia there is a loss of reflexes, a suppression of the volume of respiration; the jaw tends to drop and the tongue falls backward. There is an initial drop in the blood pressure of ten to fifteen points, but it soon returns to normal. The pulse rate increases but also soon returns to normal. The most important point to note in using this drug for surgical anesthesia is that the breathing becomes shallow, while the rate and rhythm remain unchanged. If the injection is too rapid, the respiration becomes imperceptible. It is essential that a free airway be constantly maintained by an assistant whose duty it is to elevate the relaxed jaw, or to insert an artificial airway if necessary. The depth of respiration, stiffness of the jaw, and color of the skin are guiding points to the depth of anesthesia.

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*Read before the Northeast Mississippi Thirteen-County Medical Society, Tupelo, Miss., Dec. 15, 1938.

While pentothal sodium was originally intended as an anesthetic for short operations, it is now being used in operations that consume one to three hours time, and as much as 55 c.c. of the solution has been used without ill affects to the patient. For ordinary operations lasting from twenty to thirty minutes not more than ten to fifteen c.c. of the solution is used.

This type anesthesia is most popular in plastic operations on the head, face, and neck, for it removes the anesthetic from the field of operation. For trans-urethral and cystoscopic operations, the method is displacing low spinal and sacral anesthesia. For orthopedic operations relaxation is adequate for reduction and this anesthetic is ideal. All surgical procedures of the breast from biopsy to radical amputations may be carried out under this type of anesthesia. In intra-abdominal operations the abdominal and peritoneal reflexes are not completely abolished but many surgeons use sodium pentothal regularly, first injecting a small amount of novocaine locally. In gynecologic operations, dilatations, curettements, vaginal hysterectomies and plastic work, it is ideal. For operations about the anus the sphinter muscle is sufficiently relaxed to permit hemorrhoidectomies and fistula operations.

When dressing painful burns in the nervous patient, sodium pentothal may be used, administering only two or three c.c. and the patient is awake and happy in three to five minutes afterward. In one case of this type, the anesthetic was used on fourteen different occasions without any harmful effects.

After affects of the drug: Patients who have been anesthetized by inhalation methods previous to their introduction to sodium pentothal emphasize the quiet and calm awakening experienced in the latter. They come to as from a refreshing sleep to a condition first of mild euphoria and shortly afterwards to one of clear-minded consciousness. They are rarely troubled by the common sequelae of inhalation anesthetics, headache, nausea, and vomiting. Postoperative complications are conspicious by their absence.

The contraindications are: Any gross hepatic disease, or the presence of jaundice, pulmonary tuberculosis, any type of respiratory embarrassment, low blood pressure, because of the initial drop, general feebleness, in children less than seven to eight years in whom the trachea and bronchii are small. In safe doses it will not obliterate the pharyngeal and laryngeal reflexes, and therefore it is unsuitable and dangerous for tonsillectomies.

The antidotes to sodium pentothal do not differ from those of other anesthetics, nor are they more often needed. In one series of nineteen hundred cases, only eight cases had to receive caramine, which is the most reliable. Carbon dioxide and oxygen should always be close by.

To summarize: From the standpoint of the patient the method could hardly be more satisfactory. Both the induction and the recovery are usually unnoticed by the patient, and he hardly realizes that he has had an anesthetic. The freedom from nausea and vomiting are appreciated. The surgeon appreciates the time saved during the induction and the fact that the anesthetic produces little or no ill effects. In the above mentioned series of about twenty thousand cases there was only one death reported. This was in a forty-year-old negress, a control diabetic. The big toe was being amputated when she suddenly stopped breathing.

As to the possibilities of the drug for office use by the general practitioner, certainly no operation of marked duration should ever be performed in the office. However, if the general practitioner becomes familiar with the properties of the drug, its method of administration and its potential dangers; he may safely use it in the office when light transient anesthesia is desired. But the patient should be allowed to lie down for an hour following recovery, and should never be allowed to go home unaccompanied.

I do believe that sodium pentothal is an ideal and safe anesthetic for selected cases and that it should be used only by those thoroughly acquainted with its properties and potential dangers.

THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

W. H. ANDERSON, M.D., Editor-in-Chief
MILDRED P. ANDERSON, Assistant Editor

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Mid-South Post-Graduate Medical Assembly

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Published monthly at Booneville, Mississippi

Annual subscription $1.00

Entered as second-class matter, January 19, 1926, at the post-office at Booneville, Miss., under the Act of March 3, 1870.

At the close of the old and the beginning of the new year we wish to express our sincere appreciation to one and all who have aided us in the past year in the publication of this journal and wish for each a very happy and a very successful year in 1939. We are deeply grateful to our advertisers. They have made it possible for us to finance the journal. Everything else being equal we will thank you very much to trade with the ones who advertise with us. This will do you no harm and it will do us a lot of good. We appreciate the essayists who have written papers especially for the journal. Every subscriber has helped us materially. We want each reader to feel that he has a part in the journal and that it is his to pass on helpful ideas which he might have. The personal interest, the words of encouragement and assurances of good will from many outside our state as well as within have inspired us with a deep feeling of obligation and activated with a greater determination to make the journal of greater service this year. Grave problems for the profession and for the people are before us. They are grave and important enough to challenge the best thought of every member of the medical fraternity. We trust that each and every one may feel free to express your thought through this journal which has ever had as its motto, "The best medical service for the masses at a cost at which it may be utilized."

You will note the full page announcing the program of the Mid-South Post-Graduate Medical Assembly which meets at the Peabody Hotel in Memphis February 14-17 inclusive. This is one of the greatest medical associations of its kind in the United States, in fact it is the father of this type of assembly. It covers the field of medicine and surgery by the outstanding authorities of North America in a four-day and night course. It brings a great opportunity to the medical profession of the Mid-South and in turn renders a fine service to the people served by it. If you are looking for reliable medical information in concentrated form make ready to attend this assembly.

Doctors who write papers are usually very busy men and have many interferences when composing their manuscripts. This is taken into consideration by the publisher who has his troubles and weak places. Our experience has indicated that about nine tenths of the essayists desire to make changes by the time the proof gets back to them, take out words and sentences or phrases and put in others. This causes much delay and much expense to the publisher. Under the mast head of a journal of national circulation we find: "Changes other than the correction of errors will not be permitted after the article has been set in type, so be sure to write your paper the way you want it printed." The writer who has had no experience around a print shop finds it easy to blame the linotype man for making errors, but, in truth, the greatest difficulty comes because so many essayists do not have their articles exactly as they want them to appear and do not have their copy double spaced and clearly typed.

You will note the announcement of the program for the New Orleans Graduate Medical Assembly in this issue of the journal. This is a very fine program and no doubt many from south Mississippi will attend this assembly. New Orleans is a great convention city and has a wonderful medical atmosphere. This assembly will hold from February 6-9.

It will be a mighty sad day for the American people when they have to take a doctor because he is a good politician, or when groups decide to let their practice to the lowest bidder. It is reasonably certain that this nation has the very best medical care of any people on this little terrestial ball. But even so we are not dealing with medical problems as efficiently as we might; many people are not receiving the medical care they need when they should have it, and the rank and file of doctors are not being compensated sufficiently to enable them to live, educate their families, have the equipment in their offices and the opportunity to keep informed in medicine as they should. More national aid for the sick in the lower brackets have to be supplied. But the application of this aid, it does seem, should certainly be under the direction of organized medicine. Surely no other profession under the sun has done more for the people and it seems that it could be trusted to apply the means to make the world's best service a bit more perfect.

We think the year 1938 has been a good year for medicine in Mississippi. A spirit of progress and fraternalism has pervaded the ranks of our organizations, both state and local. The courses of post-graduate instruction that have been provided have been interesting and instructive. These lectures have been well attended, hence we know that they have been appreciated. The course on syphilis has served to awaken and spread interest in this important branch of medicine as well as to prepare our doctors for better and more scientific treatment of the many victims of this serious and loathsome affliction. Whether or not we may hope for complete control or elimination is beside the question since only time can bring the answer. But we are quite sure that untold good will result from the effort; for we know that many lives will be saved and much sorrow, shame and heartache will be prevented. The final success of the undertaking depends, of course, upon the public interest that may be elicited and the co-operation that can be brought about between the doctors and the laity. Of course much depends and will always depend upon the liberality and the wisdom of our lawmakers, since much money must be expended by government as well as private individuals, if our hopes are to be fulfilled. May the work be carried on with renewed vigor and interest. Besides this special effort to be of benefit to the public and further to impress and educate our doctors, our local and district societies have done wonderful work in providing some of the finest programs that we have ever seen and heard. Men of national and international fame have been brought to our meetings and our own membership has been active and faithful in its efforts to spread modern and scientific teaching. After mentioning with pride one or more programs put on by our own district society (The N. E. Mississippi) we gladly pay tribute to the programs furnished by the Central Society. We attended two of these and they were as good as any I have heard in the A. M. A. and other large societies. We have been compelled to forego the pleasure of accepting invitations to attend meetings in Greenville, Vicksburg, Clarksdale, and the University. We appreciated these invitations and we know that we missed both pleasure and benefit because of our inability to go. We felt highly flattered that we were given places on the program held by local societies in several counties. The theme that we chose to discuss was the treatment of certain types of pneumonia with specific sera. We are convinced this is the *only* correct and effective treatment for this great killer disease. Bu let us forget that many (the vast majority) of cases that have been diagnosed and treated as pneumonia in the past were *not* pneumonia at all—simply cases of mistaken identity. Hence a sense of false security generally pervades our ranks and the laity as well. Let us not forget that forty per cent or more of pneumonias have always proved fatal and will continue to so prove until we learn to diagnose and treat these cases properly. Personally I would be ashamed to report a series of cases with a mortality rate below twenty-five per cent; for I know that I would subject myself to the criticism of being a poor diagnostician or a good fabricator, unless I should use modern methods of diagnosis and serum treatment. Let us not forget that no man can be sure of his diagnosis unless confirmed by microscopical findings. Even then until the organism has been typed we are utterly unprepared to treat correctly. I would like so much to say more, but I shall only add that we can reasonably expect to cut the death rate in half when correct typing has been done and a serum specific for that type is properly used. We hope that all our readers have enjoyed the holiday season in an innocent way and that the coming year will prove to be a good one in all legitimate undertakings and experiences. And in conclusion we would say, in the event state medicine should overtake us in the near future, let us adjust ourselves as best we may and let us strive to correct any evils that may be seen in the plan that may be prescribed by law, never forgetting that honest mistakes can always be corrected if faced squarely and combatted honestly and intelligently. With combined effort intelligently directed we may hope and expect to make the new year even better than the one that has just passed.—G. S. B.

The American doctor leads a more or less isolated life. He comes in contact with many people, it is true, but they are usually the sick who are primarily interested in their illness, and most of them are women. He probably reads in the paper that men in business, particularly "big business," have been complaining bitterly about the interference of the Government in their affairs. He does not realize, however, that Governmental interference may possibly be a tremendous factor in reducing the efficiency of the business man, besides subjecting him to a tremendous amount of expense in order to make reports, to get up figures and to fill out forms. Raymond Moley, in an editorial in News Week a short time ago, said it is a great pity that "a man like Wilke, president of the Commonwealth and Southern, and like other business men, has been compelled to turn away from the process of expanding business enterprise and to reemploy millions of the unemployed . . . that the has been compelled to spend his great talents in an unproductive controversy."

Now it is the turn of the medical profession to be assailed. It is about to be investigated through its chief medical organization. The men who are officers in this organization have been compelled to stop their usual productive activities in order to prepare for a subpoena relative to the District of Columbia case. In a recent visit to the headquarters of the Association it was found that the men at the head of several important divisions were spending day and night, to the detriment of their regular duties, in order to collect a tremendous amount of data and facts relative to the relations of the American medical profession to the individual medical man. Not only were all files of many years back suppoenaed but even such minutiae as intradepartmental communications subpoenaed. The time and energy required to get these filed papers together are terrifically demanding. All this simply because the Federal Government has decided, through a few cock-brained individuals, that the American Medical Association controls in every way, form and manner the practice of medicine in the United States. This subpoenaing of records is probably entirely a fishing expedition. It is hoped that something will be found against the American Medical Association which will substantiate what these few Washington officials think is true but about which they have no proof whatsoever, nor will any proof be brought forth about something which is not true.

Nor is this all. Recently over one of the big radio chains a debate was held between the editor of the Journal of the American Medical Association and a representative of the Department of Justice at Washington. In this debate the Washington speaker tried and convicted the American Medical Association before a trial had taken place. This remarkable and deplorable state of affairs, that the government through its trial officials should attempt to prejudice a case even before this case had appeared before a jury is almost unbelievable and unthinkable.

The above paragraphs may seem like a tirade against the Federal Government or rather a few of its employees. It is, but it is well deserved. A few Federal Government officials are apparently firmly convinced that state medicine should be introduced at a very early time. In order to have the backing of the American people, which they undoubtedly do not have at the present time, they are attempting by propaganda and by half truths to confuse the people by contending that the way American medicine is conducted at the present time is harmful to the individual and to the population as a whole. When, as and if, through their propagandizing channels they may be able to give the American public a distorted idea of medical practice, then they feel the time will be ripe to spring state medicine on the American voter.

This is really most lamentable. American medicine needs no defense. One of the important officials of Washington has just pointed out that the death rate last year was lower than it had been in this country for many years. The health of the population as a whole is guarded most effectively by present day methods. The people of America receive better medical care than any country in the world. There is never a serious illness or epidemic which is not taken care of adequately. If the American man, woman or child is not getting medical care it is either because of his unwillingness to make use of the existing facilities or else it is sure to be some minor condition which is of minimum moment. Did any one in Washington ever hear of an indigent patient with a broken leg or a pneumonia or an acute appendicitis who did not receive the same care, attention and skill that a person would receive who can afford to pay? —Editorial, NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

THE OKLAHOMA CITY MEETING

As incoming physicians stepped off the train into the bright Oklahoma sunshine November 15, they were met by handsome cowboys in red velvet vests and white leather chaps, gifted rough riders with an extensive medical vocabulary. Newspapers just before the meeting featured a blizzard in the middle west, and guests who came with fur coats and galoshes were grateful for the warm clear weather. Though they were warned by their hosts that "All the weather in the United States comes to Oklahoma to change," there was no change during the convention, mild sunny days continued to the end of a perfect meeting.

Never have hosts and hostesses been more hospitable or offered more agreeable entertainment to physician guests and their wives. Southern Medical members, though accustomed to the friendly spirit which always characterizes their gatherings, concluded that this year the center of Southern hospitality had moved westward. No city could have made its guests more pleasingly welcome.

Meetings such as this, of the majority of the outstanding physicians of the South, cannot help reflecting the steady increase and expansion of educational opportunities in the last quarter century in this part of the country. This section of the United States has seen a greater development of medical colleges than has any other part of the world. To physicians who have attended Southern Medical meetings over a period of years, the effects of the South's constantly rising standard of medical education are more apparent at each convention.

The scientific program of the meeting covered most of the current medical research of importance. Local clinics on the opening day were among the most extensive and stimulating that have been presented by a host city. General clinic and section programs portrayed a great variety of medical and surgical news.

The many scientific exhibits attracted general interest. As is usual, the committee on awards reported difficulty in selecting from the large group exhibits for special commendation. Awards were made to the following excellent displays: first, to Dr. A. C. Scott, of Temple, Texas, for his exhibit on breast tumors; second to Drs. Graham Asher, Frank Hoecker and George Walker, of Kansas City, for their exhibit on the lag screen electrocardiogram; and third, to Dr. R. H. Rigdon, of Nashville, for his exhibit on lesions produced by staphylococci and staphylococcus toxin in experimental animals.

The numerous technical exhibits were of excellent quality. Manufacturers pleasingly, interestingly and with much honesty presented instruments, drugs, and books, illustrative of advances along many lines.

The meeting was well attended. Total registration showed the following: there were 2,200 physicians, with 585 women guests, making with students, nurses, and exhibitors a grand total of 3,832 persons who attended the association's thirty-second annual meeting.

New officers elected for the coming year are: President, Dr. Walter E. Vest, Huntington, West Virginia; President-elect, Dr. Arthur T. McCormack, Louisville, Kentucky; First Vice-president, Dr. Henry H. Turner, Oklahoma City; Second Vice-president, Dr. William Hibbits, Texarkana, Ark.-Texas; Chairman of the Council, Dr. Edgar G. Ballenger, Atlanta, Georgia; Executive Committee, Chairman, Dr. William Thornwall Davis, Washington, D. C.; Dr. Vincent W. Archer, University, Virginia, and Dr. Alphonse McMahon, St. Louis, Missouri.

Memphis was chosen as the meeting place for 1939.—SOUTHERN MEDICAL JOURNAL.

THE MEDICAL LIBRARY OF THE STATE BOARD OF HEALTH

Gratifying progress was made during 1938 in developing a useful collection of medical journals and books in the State Board of Health Medical Library.

Located on the ground floor of the Old Capitol, the Medical Library is comfortably equipped with a reading room and modern steel shelving. Its services are available not only to the public health personnel but to physicians, dentists, and nurses as well. Books or journals may be borrowed for a two-week period and for those unable to come to the library, a mailing service is conducted.

The medical library is the physician's postgraduate school and offers unlimited opportunity for advancing medical knowledge and research. Dr. Osler once said, "It is astonishing with how little reading a doctor can practice medicine, but it is not astonishing how badly he may do it . . . To study the phenomena of disease without books is to sail an unchartered sea, while to study books without patients is not to go to sea at all. For the teacher and the worker, a good library is indispensable. They must know the world's best work and know it at once."

Such rapid advances are being made in all fields of medicine and science that only through an adequate, up-to-date collection of medical literature can one hope to keep up with current developments. The State Board of Health Medical Library, with more than fifty-three volumes of basic texts and journals, provides an excellent opportunity to keep up with the constantly changing methods in diagnosis and treatment and for broadening medical knowledge generally. No favor is asked of the profession in return for this service; however, the interest and help shown through supplying back periodical files has been very gratifying. Recently, a San Diego Library gave several volumes of the old **Mississippi Medical Record,** published in the early 1900's and filled with local medical history. Volumes like these will be invaluable to the individual who undertakes to write a history of medicine in Mississippi, and the State Board of Health Library would like very much to have similar material of local interest, whether in the form of periodicals or old manuscripts. There must be a great deal of such material stored away and doing no one any good, which if placed in the library would be kept alive and made useful to others. Accumulated journals, which many physicians often discard after a period of time, will also be welcome additions, as they may help to fill gaps in important series. The transportation costs on such items will be provided for by the State Board of Health Library.

The enthusiastic response of the profession in the development of a useful Medical Library is but another evidence of the progressiveness of Mississippi physicians and their desire to improve medical practice and the welfare of the public generally.

E. Louise Williams, Librarian

SOME RECENT ACQUISITIONS

Andrews—*Diseases of the Skin.,* 1938.

Bulloch—*History of Bacteriology,* 1938.

Craig and Faust—*Clinical Parasitology,* 1938.

Behan—*Cancer,* 1938.

Bluemel—*The Troubled Mind;* a study of nervous and mental diseases, 1938.

Bancroft, Pierce and Cutler — *Pediatric Nursing,* 1938.

Chappell—*In The Name of Common Sense:* worry and its control, 1938.

Curtis—*Textbook of Gynecology,* 3rd ed., 1938.

Hammer—*Dairy Bacteriology,* 1938.

Gilbert—*Biography of the Unborn,* 1938.

DeKruif—*The Fight for Life,* 1938.

Gregory—*A. B. C. of the Endocrines,* 1935.

Fishbein—*Medical Writing: The Technic and the Art,* 1938.

Jensen—*Insulin, Its Chemistry and Physiology,* 1938.

Julianelle—*The Etiology of Trachoma,* 1938.

Hawes and Stone—*Diagnosis and Treatment of Pulmonary Tuberculosis,* 1936.

Merritt—*The Cerebrospinal Fluid,* 1938.

Mallory—*Pathological Technique,* 1938.

McBride and Sink—*Crippled Children, Their Treatment and Orthopedic Nursing,* 1937.

Perkins—*Cause and Prevention of Disease,* 1938.

Proudfit—*Nutrition and Diet Therapy,* 7th ed., 1938.

Reimann—*The Pneumonias,* 1938.

Stone—*The New-Born Infant,* 1938.

Tuft—*Clinical Allergy,* 1938.

Walton — MARIHUANA: *America's New Drug Problem,* 1938.

MISSISSIPPI PHYSICIANS WHO DIED DURING 1938

Adams, R. M., 65, Ripley, Diabetes Mellitus, July 1; Ashley, William F., 72, Shaw, Chronic Nephritis, March 22; Alexander, A. P., 63, Como, Acute Myocarditis, Aug. 9; Bailey, O. L., 68, Ocean Springs, Carcinoma of Pancreas, June 21; Bethea, John J., 74, Hattiesburg, Carcinoma of Bladder with Metastasis to Lungs, January 24; Birchett, J. A. K., Sr., 71, Vicksburg, Coronary Thrombosis, July 22; Brister, S. R., 74, Greenwood, Cancer of Prostate, Nov. 10; Brown, T. J., 76, Grenada, Chronic Nephritis, October 10; Bullock, J. K., 39, Jackson, Cerebral Hemorrhage, December 26; Castle, Sara A., 76, Meridian, Hypertensive Heart Disease, August 22; Crigler, L. W., New York City, 61, Arteriosclerosis, April 30; Dodson, J. C., 56, Carthage, Apoplexy, May 15; Evans, James S., 80, Houston, Arteriosclerosis, April 14; Fore, O. R., 63, Canton, Ulcer of Stomach, December 25; Haralson, H. H., 84, Vicksburg, Hypostatic Pneumonia, November 18; Harrelson, A. M., 73, Bay Springs, Cirrhosis of Liver, November 27; Harrison, A. C., 72, Charleston, Pericarditis, November 14; Hunt, D. R., Sr., 68, Ellisville, Chronic Myocarditis, May 8; Johnston, W. R., (Col.), 57, Natchez, Encephalitis Lethargica, Sept. 6; Jones, E. P., 73, Hermanville, Myocarditis, November 10; Kelly, T. C., [illegible], Sidon, Cerebral Hemorrhage, December 11; Ladner, A. R., 61, Foxworth, Progressive Spastic Paralysis, January 22; Luckett, J. A., 56, Dell, Ark., Automobile Accident, November 22; Lucas, J. L., (Col.), 52, Jackson, Stricture of Urethra, January 23; McCune, A. M., 65, Rose Hill, Chronic Nephritis, January 12; MacDonald, Jessie A., 28, Collinsville, Suicide by Gunshot, December 3; MacDonald, S., 57, Injury by Horse, November 17; McEachern, M. A., [illegible], North Carrollton, Lobar Pneumonia, January 24; McLaurin, D. P., 78, Jackson, Chronic Myocarditis, April 4; Mhoon, W. S., 59, Phillip, Lobar Pneumonia, January 5; Pope, W. R., 62, Kosciusko, Carcinoma of Larynx, January 2; Robertson, G. R., 93, Brookhaven, Rt. 1, Arteriosclerosis, April 15; Seale, William C., 45, Catchings, Accidental Fall, March [illegible]; Ward, D. H., 54, Gulfport, Tetanus, February 5; Ware, Archie J., [illegible], Jackson, Chronic Nephritis, January 30; Watkins, H. A. J., 85, Jackson, Senility, May 7; Wilson, W. D., 68, Schlater, Chronic Nephritis, Sept. 23.

COMING MEDICAL MEETINGS

MISSISSIPPI STATE MEDICAL ASSOCIATION, Gulfport, Miss., May 9, 10, 11.

Southern Section of The American Laryngological, Rhinological and Otological Society, New Orleans, La., Jan. 14, 1939.

Mississippi State Hospital Association, Jacksonville, Fla., April 13, 14, 15, 1939.

Southern Safety Conference, Jackson, Miss., February 16, 17, 1939.

International College of Surgeons, New York City, May 22, 23, 24, 1939.

Florida Medical Association, Daytona Beach, May 1, 2, 3, 1939.

Alabama Medical Association, Montgomery, Ala., April 18-20, 1939.

Georgia Medical Association, Atlanta, Ga., May 9-12, 1939.

Southeastern Surgical Congress, Atlanta, Ga., March 6-8, 1939.

American Medical Association, St. Louis, Mo., May 16-19, 1939.

American College of Physicians, New Orleans, March 27-31, 1939.

American Congress of Obstetrics and Gynecology, Cleveland, Ohio, Sept. 11-15, 1939.

Southern Medical Association, Memphis, November, 1939.

DR. W. H. CLEVELAND

This is the likeness of Dr. W. H. Cleveland of Tupelo, who was chosen president-elect of the Mississippi Public Health Association at its last meeting in Jackson. He is worthy and well qualified to serve in this capacity, to follow the very able president now at the helm, Dr. Michael Smith of Vicksburg. Dr. Cleveland is a man of splendid native ability with the addition of very thorough training for the work he now holds. He is no doubt one of the very ablest public health officers in the entire state.

He is a native of Itawamba County, has had experience as a teacher, graduated in medicine from the University of Tennessee in [illegible] and did general practice until 1925. He then served three years as assistant physician at the Mississippi State Hospital at Jackson and then took post-graduate work at Tulane. He did special study in public health work at the Rockefeller Foundation Training Station at Indianola, and later at Johns Hopkins. He served one year as county health officer in Lamar County and then came to Lee where he has remained.

He is an able and a practical public health man with fine executive ability.

TO THE DOCTORS OF THE MID-SOUTH

I am taking this method to urge all of you to attend the fifty-fourth annual session of the Mid-South Post-Graduate Medical Assembly, which meets in Memphis next month. This assembly is one of the best in the United States and, up until a few years ago, was unique in its field—presenting new material to the busy doctor. Recently in many parts of the country this immensely popular and successful medical organization has been a pattern for offering post-graduate study.

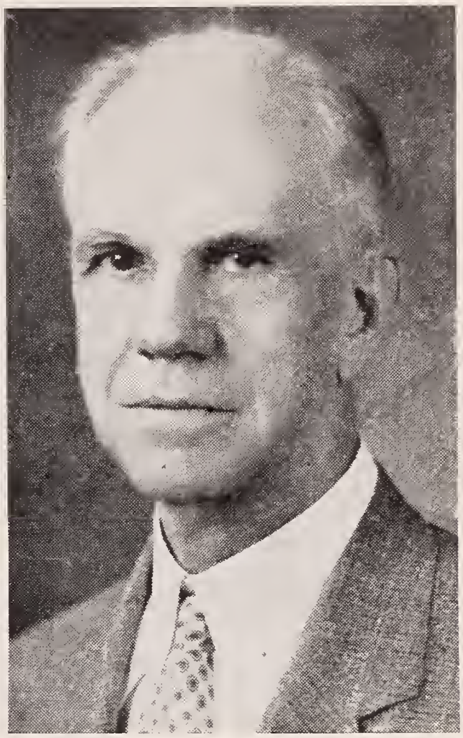
Four days spent attending this meeting will assure you of a well-rounded, brief, and pointed post-graduate course in general subjects, as well as the specialties. I am sure that each one of us will become a better doctor by association with men in other specialties. Though none of us can comprehend all medical knowledge, we can all strive to improve ourselves in our specialty, as well as medicine in general.

It is indeed important that Mississippi make the best showing in attendance that it ever has, because we are progressing in Mississippi medicine, and that is one of the best ways to show it at this time. I, therefore, urge and insist that every doctor in the mid-South come early and stay late, and enjoy one of the best meetings that you have ever attended.

Looking forward to greeting you in Memphis February 14-17th,

Very truly yours,
Lawrence W. Long,
President Mid-South Post-graduate Medical Assembly.

DR. MITCHELL HONORED



It is doubtful if there is a man in Mississippi who has more real friends and well-wishers than Dr. Chas. D. Mitchell, superintendent of the State Hospital for the Insane, located near Jackson. Dr. Mitchell has just been honored with election as president of the Southern Psychiatric Association. This is quite an honor and is a recognition of his ability and his knowledge of this important branch of medical science. Dr. Mitchell is a native of Pontotoc County where he was born October 29, 1866, 72 years ago. His father was Hon. Chas. B. Mitchell, one of the ablest lawyers that county has ever produced. Col. Mitchell served as district attorney and also in the legislature, being speaker of the house while serving in that body. Dr. Mitchell is a brother to Hon. George T. Mitchell of Tupelo, former attorney general of the state and now serving as federal district attorney of the northern district of Mississippi. Gen. Mitchell has been recognized for many years as one of the ablest lawyers the state has ever produced.

Dr. C. D. Mitchell practiced medicine in Pontotoc until slightly more than 20 years ago when he was appointed by Gov. Bilbo as superintendent of the Insane Hospital in Jackson. He was re-appointed to that position by Gov. Russell and again re-appointed by Gov. Whitfield and again by Gov. Bilbo. He was out for about two years during the administration of Gov. Conner and was then re-appointed by Gov. White and still holds the position he has so ably filled for more than twenty years. Dr. Mitchell was largely instrumental in the moving and rebuilding of the hospital for the insane and the institution now located several miles east of Jackson is one of the best and most modern hospitals of its kind in the United States, if not in the whole world. Dr. Mitchell loves the practice of medicine and his big, sympathetic heart goes out in deep and unselfish feeling for the past 20 years.

When Dr. Mitchell left his private practice in Pontotoc he made a great financial sacrifice, and several times since he has been holding his present position he has turned down offers from other institutions carrying a much larger salary, but the love he has for his native state and the hope that he may render service to the unfortunate class of mentally affected people, has kept him in Mississippi where he has dedicated his life to service and where he has wrought so wonderfully well. The medical fraternity feels a special pride in the fine record Dr. Mitchell has made and all the people of the state join the profession in that feeling of love, appreciation and high respect for the man who has sacrificed that he might serve, and served that he might save. With deep affection we all wish that the hand of time shall not strike a violent blow, but shall stroke his classic brow with that love and tenderness with which he has treated the sick and suffering patient.

In the field of treatment and cure he and his hospital have wrought well, and now his vision is broadened to extend into the great field of prevention in mental sickness. We are proud of the distinction his fellow specialists have conferred upon him. But while we rejoice with him let us extend to him and the institution over which he presides a helping hand in order that he may be more supremely happy in the realization of his dream of service to the unfortunate mentally sick of our state.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

From the unusual number of inquiries as well as enrollments which have been received at this early date, the impression is gained that the third annual New Orleans Graduate Medical Assembly, which will be held from February 6 to 9, 1939, at the Roosevelt Hotel, will be the largest from the standpoint of attendance. It is also especially significant that a very considerable number of the inquiries has come from those who have attended previously. This has been especially gratifying to the sponsors of this intensive refresher course, because it indicates that the previous programs have supplied just what the busy practitioner has so long felt that he needed most.

The success of the previous assemblies has been an inspiration to introduce additional features, and this year eighteen physicians, each one an outstanding leader in his special field, will contribute one of the best planned courses yet attempted. The guest speakers who have been chosen are as follows:

Dr. Harry J. Shields, Toronto—Anesthesia and Gas Therapy.

Dr. N. C. Gilbert, Chicago—Cardiology.

Dr. Clinton Welsh Lane, St. Louis—Dermatology.

Dr. Chester M. Jones, Boston—Gastro-Enterology.

Dr. James C. Masson, Rochester — Gynecology.

Dr. Paul H. Ringer, Asheville—Medicine.

Dr. Cyrus C. Sturgis, Ann Arbor—Medicine.

Dr. Franklin C. Ebaugh, Denver—Neuropsychiatry.

Dr. M. Edward Davis, Chicago—Obstetrics.

Dr. Harry S. Gradle, Chicago—Ophthalmology.

Dr. A. Bruce Gill, Philadelphia—Orthopedics.

Dr. William P. Wherry, Omaha—Otolaryngology.

Dr. Wiley D. Forbus, Durham—Pathology.

Dr. Frederick F. Tisdall, Toronto—Pediatrics.

Dr. Arthur U. Desjardins, Rochester—Radiology.

Dr. C. Gordon Hayd, New York City—Surgery.

Dr. I. S. Rovdin, Philadelphia—Surgery.

Dr. Robert Herbst, Chicago—Urology.

Each one of these nationally and internationally famous authorities will contribute liberally to the program and will be available for informal discussions of the problems of those who attend.

A small registration fee of $10.00, which covers all of the features, including four roundtable luncheons as well as the smoker, makes it possible to enjoy four full days of medical education, combined with recreation in the interesting city of New Orleans.

Ample provision will be made for the entertainment of the ladies. A postal card addressed to the New Orleans Graduate Medical Assembly, 1430 Tulane Avenue, New Orleans, will bring especially interesting information concerning the program as well as other attractions.

News and Notices

NEWS ITEMS IN SOUTHERN MEDICAL NEWS, JANUARY, 1939

LOUISIANA:

Dr. Lucien A. LeDoux, New Orleans, has been appointed a member of the Council of the Southern Medical Association from Louisiana for a regular Council term of five years, the appointment having been announced recently by the president, Dr. Walter E. Vest, of Huntington, W. Va. Dr. LeDoux succeeds Dr. Arthur A. Herold, Shreveport, who, having served the constitutional limit, was not eligible for reappointment.

MISSISSIPPI:

Dr. W. H. Anderson, Booneville, has been appointed a member of the Council of the Southern Medical Association from Mississippi for a regular Council term of five years, the appointment having been announced recently by the president, Dr. Walter E. Vest, of Huntington, W. Va. Dr Anderson succeeds Dr. Harvey F. Garrison, Jackson, who, having served the constitutional limit, was not eligible for reappointment.

OKLAHOMA:

Dr. R. M. Anderson, Shawnee, has been appointed a member of the Council of the Southern Medical Association from Oklahoma for a regular Council term of five years, the appointment having been announced recently by the president, Dr. Walter E. Vest, of Huntington, W. Va. Dr. Anderson succeeds Dr. W. K. West, Oklahoma City, who, having served the constitutional limit, was not eligible for reappointment.

DR. RUDOLPH MATAS

Dr. Matas returns this month from Brussels, Belgium, where he attended the International Society of Surgery of which he has served as president for the triennium 1936-1938. This was the eleventh congress in the history of this assembly, ne plus ultra of surgical minds. We bow in homage to Dr. Matas for bringing to our country and to the South this unprecendented honor.

While in Europe Dr. Matas visited his native Spain, now devastated by war. He finally was able to remove his sister and her maid to Paris, where they will remain until the war is over.

REMOVAL OF OFFICES

Dr. John W. Ragsdale and Dr. Chester D. Allen announce the removal of their offices from 327 Medical Arts Building to 1019 Madison Avenue, Memphis, Tennessee, Telephone 2-2341. Practice limited to urology and urological surgery.

HONORARY MEMBERS

Drs. C. B. Mitchell and H. L. Scales, Jr., were initiated as honorary members at the installation of the Mississippi Gamma Chapter of Alpha Epsilon Delta, national honorary premedical fraternity at Mississippi State College on December 10th.

TENTATIVE PROGRAM

Section on Hygiene and Public Health, Mississippit State Medical Association, N. C. Knight, M.D., Chairman, Tuesday May 9, 1939—1:30 P. M.

1. Address.—Gov. Hugh White.
2. The Public Health Aspects of Syphilis Control.—Paul Padgett, Associate of J. Earle Moore, Johns Hopkins Syphilis Clinic, Baltimore, Md.
3. Syphilis In Its Relation to Insanity in Mississippi During the Last 10 Years.—F. A. Donaldson, Mississippi State Insane Hospital, Whitfield, Miss.
4. The Public Health Aspects of Pneumonia Control. — Roderick Heffron, New York City.
5. The Value of a Home Delivery Nursing Service.—T. Paul Haney, Jr., Director, Pike County Health Department, McComb, Miss.

Discussion from the standpoint of the general practitioner—Thomas Purser, McComb, Miss. General Discussion.

HEALTH DIRECTOR MOVES

Dr. N. C. Knight, director of the Coahoma County Health Unit for five years, has resigned to serve as director of the Lauderdale County Health Department at Meridian. Dr. Knight and family will move to Meridian Feb. 1.

Dr. Guy Post of Holly Springs will succeed Dr. Knight. Dr. Post has been director of health work in Marshall County for the past year.

The assignment at Meridian is a promotion for Dr. Knight, as the unit is a larger post.

NORTHEAST MISSISSIPPI THIRTEEN-COUNTY AUXILIARY ELECTS

At the December business session of the Northeast Mississippi Medical Auxiliary Mrs. V. B. Philpot of Houston was elected president, Mrs. Bernard Patrick of Corinth, vice-president, and Mrs. E. K. Guinn of McCondy, secretary-treasurer.

This auxiliary is the largest in the state, having a membership of over sixty.

"GUARD AGAINST SYPHILIS"

"Guard Against Syphilis" is the slogan of National Social Hygiene Day to be observed throughout America on February 1. The day will be marked by some 5,000 meetings to highlight present community campaigns against syphilis and will focus public attention on vital next steps in the conquest of syphilis, according to Dr. Walter Clarke, executive director of the American Social Hygiene Association.

Evidences of interest in the forthcoming event, the third annual observance in the current attack on syphilis, point to a larger nation-wide demonstration than those of previous years, Dr. Clarke said. The Association's offices in New York as well as San Francisco report increased activity and interest on the part of official and voluntary health and welfare agencies, civic groups, service clubs, women's organizations, churches, schools and upward of 1000 youth bodies.

Defining the objectives of the 1939 attack in terms of the slogan, these points were said to underly present national, state-wide and community planning in social hygiene:

Guard against syphilis by telling the American people about this dangerous disease—how it can be prevented and cured

Guard against syphilis in youth, the age of greatest incidence, by strengthening the efforts of church, home, and school to provide better facilities for sex education, character development, and preparation for marriage; and by correcting community conditions which threaten the health and welfare of young people.

Guard against syphilis in marriage and childhood by encouraging good laws—and their observance — requiring examinations for all those about to marry and for all expectant mothers.

Guard against syphilis by attacking prostitution and quackery, two arch-accomplices of the disease.

Guard against syphilis by supporting adequate voluntary and official health programs, both state and local.

As in years past, press and radio aid will be sought in cultivating public interest in Social Hygiene Day and its objectives.

The United States Public Health Service is again co-operating.

ANNOUNCEMENT

The American Board of Ophthalmology announces an important change in its method of examination of candidates for the board's certificate.

Examinations will be divided into two parts. Candidates whose applications are accepted will be required to pass a **written** examination which will be held simultaneously in various cities throughout the country approximately 60 days prior to the date of the oral examination.

The **written** examination will include all of the subjects previously covered by the practical and oral examinations.

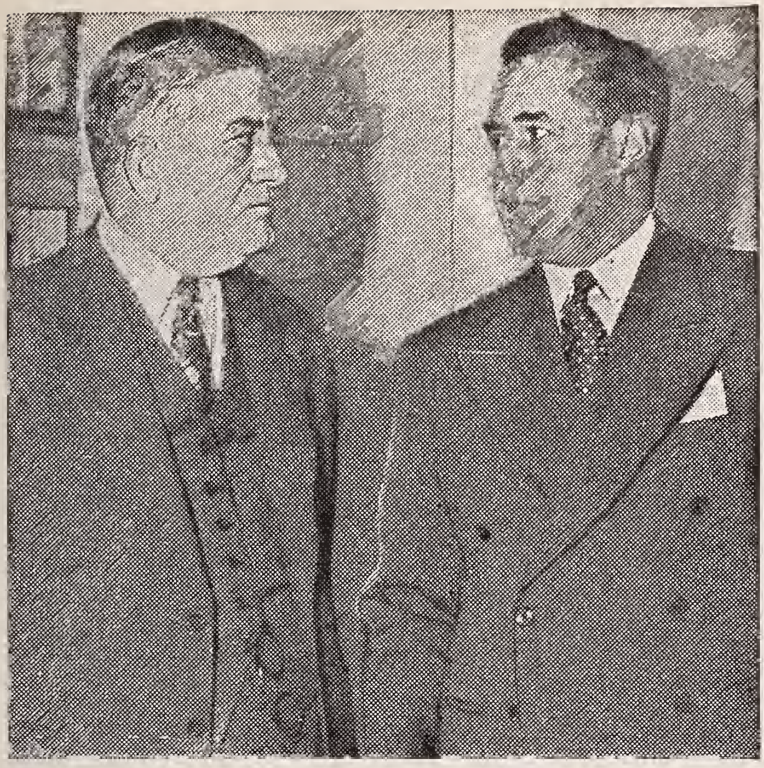
Oral examinations will be held at the time and place of the meeting of the American Medical Association and of the American Academy of Ophthalmology and Oto-Laryngology, and occasionally in connection with other important medical meetings. The **oral** examination will be on the following subjects: External Diseases, Ophthalmoscopy, Pathology, Refraction, Ocular Motility, Practical Surgery.

Only those candidates who pass the written examination and who have presented satisfactory case reports will be permitted to appear for the oral examination.

Examinations scheduled for 1939: Written: March 15th and August 5th. Oral: St. Louis, May 15th; Chicago, October 6th.

Applications for permission to take the written examination March 15th must be filed with the secretary not later than February 15th.

Application forms and detailed information should be secured at once from Dr. John Green, Secretary, 6830 Waterman Ave., St. Louis, Mo.



Aids In Paralysis Fight

New York.—Dr. Felix J. Underwood (left) of Jackson, Chairman for Mississippi in the "Fight Infantile Paralysis" campaign, confers at national headquarters with Keith Morgan, Chairman of the Committee for the Celebration of the President's Birthday.

Dr. Underwood, State Health Officer, reported to Mr. Morgan that Mississippi is being rapidly organized in this year's intensified drive for funds to aid the cause of crippled children. Chairmen are being appointed for each Ole Miss county.

An Instructive Mid-Winter Vacation

The New Orleans Graduate Medical Assembly

February 6, 7, 8, 9, 1939 — New Orleans, La.

GUEST SPEAKERS

18 Physicians of National Reputation

DR. HARRY J. SHIELDS, Toronto, Anesthesia and Gas Therapy
DR. N. C. GILBERT, Chicago, Cardiology
DR. CLINTON WELSH LANE, St. Louis, Dermatology
DR. CHESTER M. JONES, Boston, Gastro-Enterology
DR. JAMES C. MASSON, Rochester, Gynecology
DR. PAUL H. RINGER, Asheville, Medicine
DR. CYRUS C. STURGIS, Ann Arbor, Medicine
DR. FRANKLIN G. EBAUGH, Denver, Neuropsychiatry
DR. M. EDWARD DAVIS, Chicago, Obstetrics
DR. HARRY S. GRADLE, Chicago, Ophthalmology
DR. A. BRUCE GILL, Philadelphia, Orthopedics
DR. WILLIAM P. WHERRY, Omaha, Otolaryngology
DR. WILEY D. FORBUS, Durham, Pathology
DR. FREDERICK F. TISDALL, Toronto, Pediatrics
DR. ARTHUR U. DESJARDINS, Rocheester, Radiology
DR. C. GORDON HEYD, New York City, Surgery
DR. I. S. RAVDIN, Philadelphia, Surgery
DR. ROBERT HERBST, Chicago, Urology

Educational **Recreational**

REGISTRATION FEE OF $10.00 COVERS ALL FEATURES, INCLUDING FOUR ROUND TABLE LUNCHEONS AND SMOKER

For further information, write the Secretary, Room 105, 1430 Tulane Avenue, New Orleans

EXHIBITORS

MID-SOUTH POST-GRADUATE MEDICAL ASSEMBLY — MEMPHIS, TENN. HOTEL PEABODY—FEBRUARY 14-17, 1939

E. L. Mercere, Inc., Memphis, Tenn.

Bilhuber-Knoll Corporation, 154 Ogden Avenue, Jersey City, N. J.

Frederick Stearns and Company, 6533-55 E. Jefferson Avenue, Detroit, Michigan.

General Electric X-Ray Corporation, 2012 Jackson Blvd., Chicago, Ill.

Richards Manufacturing Company, 756 Madison Avenue,, Memphis, Tennessee.

Mead Johnson & Company, Evansville, Ind.

R. B. Davis Sales Company, Jackson, Ferry and Harrison Streets, Hoboken, N. J.

Scientific Sugars Company, Columbus, Ind.

Schering Corporation, Bloomfield, N. J.

J. A. Majors Company, 1301 Tulane Avenue, New Orleans, La.

Merck & Company, Inc., Rahway, N. J.

The Wm. S. Merrell Company, Cincinnati, Ohio.

Jones Metabolism Equipment Company, 315-323 South Honore Street, Chicago, Ill.

G. W. Carnrick Company, 20 Mt. Pleasant Avenue, Newark, N. J.

Burroughs Wellcome & Company (U.S.A.) Inc., 9 & 11 East Forty-First Street, New York City.

The Borden Company, 350 Madison Avenue, New York City, N. Y.

A. S. Aloe Company, 1819-23 Olive Street, St. Louis, Missouri.

Gerber Products Company, Fremont, Michigan.

E. R. Squibb & Sons, 745 Fifth Avenue, New York City, N. Y.

Mellins Food Company, Boston, Mass.

Southern Surgical Supply Company, Baptist Hospital Building, Memphis, Tenn.

Aznoe's, 30 North Michigan Avenue, Chicago, Illinois.

The DeVilbiss Company, Toledo, Ohio.

Philip Morris & Company, Ltd., Inc., 119 Fifth Avenue, New York City, N. Y.

The Ohio Chemical & Manufacturing Company, 1177-1199 Marquette Street, N. E., Cleveland, Ohio.

Union Manufacturing Company, 2537 Broad Street, Memphis, Tenn.

Puritan Compressed Gas Corporation, 2012 Grand Avenue, Kansas City, Missouri.

White Laboratories, Inc., 113 North 13th St., Newark, N. J.

J. B. Lippincott Company, East Washington Square, Philadelphia, Pa.

Lederle Laboratories, Inc., 30 Rockefeller Plaza, New York City, N. Y.

Abbott Laboratories, North Chicago, Illinois.

The Mennen Company, Newark, N. J.

The Dick X-Ray Company, Medical Arts Bldg., Memphis, Tenn.

Petrolagar Laboratories, Inc., 8134 McCormick Blvd., Chicago, Illinois.

The Arlington Chemical Company, Yonkers, New York.

Kay Surgical, Inc., Medical Arts Building, Memphis, Tenn.

Bard-Parker Company, Inc., Danbury, Conn.

Lee DeForest Laboratories, Los Angeles, Calif.

Holland-Rantos Company, Inc., 37-41 East 18th Street, New York City, N. Y.

The C. V. Mosby Company, 3523-25 Pine Blvd., St. Louis, Missouri.

H. G. Fischer & Company, 2323-45 Wabansia Avenue, Chicago, Illinois.

John Wyeth & Brothers, Inc., 1118 Washington, Philadelphia, Pa.

Pet Milk Sales Corporation, Acrade Building, St. Louis, Missouri.

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The above have reserved space for the Mid-South Meeting in February. This is a fine tribute to the meeting and to the ability and the alertness of Dr. Gilbert Levy. We should be very grateful to the exhibitors for their aid in financing the Mid-South, the best meeting of its type in the United States.—Ed.

DR. ALPHONSE McMAHON

Dr. Alphonse McMahon, 634 North Grand Boulevard, St. Louis, Missouri, has just been installed (January 3, 1939) President of the St. Louis Medical Society for 1939. Dr. McMahon has been an active member of the Southern Medical Association for a number of years. He was Chairman of the Committee on Program and Clinics for the St. Louis meeting of the Southern Medical Association and as Chairman of that Committee is responsible for fine "St. Louis Day" program for that meeting. Dr. McMahon is the member of the Council of the Southern Medical Association from Missouri and at the Oklahoma City meeting was made a member of the newly created Executive Committee of the Council.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

Prontosil In Eye, Ear, Nose and Throat Condition*

ALSTON CALLAHAN, M.D.
VICKSBURG, MISS.

INTRODUCTION

Careful and critical observation must necessarily be made of any new therapeutic agent and this is especially true of chemotherapeutic preparations. It is as easy to become too conservative, thereby withholding an important aid, as it is to become too radical, and to use it before its value is proven. The first brilliant flame of enthusiasm over sulfanilamide has been abated to some degree as more is learned of it, yet the favorable reports concerning its use have so rapidly accumulated that an earnest consideration of it is warranted. As is to be expected with a drug, undisputedly of great value, it has already been used extensively in general medicine and other branches as well as in ophthalmology and otolaryngology.

HISTORY

It has been known for some years that azo dye substances containing a sulfamido group possess qualities which are inimical to experimental streptococcic infections in mice, but in 1935 Domagk's work with "prontosil" announced to the world more than an inkling of its effectiveness. Domagk's solution was the hydrochloride of 4-sulfamido-2, 4 diaminoazobenzol but further study led to the discovery of prontosil solution which is a 2.5 per cent watery solution of disodium 4-sulfamidophenyl-2-azo-7-acetylamino-1-hydroxynaphthalene 3, 6 disulphonate. In June, 1936, Colebrook and Kenny reported such favorable results in the treatment of puerperal sepsis in human subjects and of experimental infections in mice with prontosil solution, that a further impetus was given to its study.

Much experimental and clinical study of sulfanilamide and its derivatives has been done since then, but as yet the mechanism of its action is not fully understood. Several ingenious theories have been suggested: Colebrook and Kenny produce in vitro evidence indicating that the serum of patients ill with streptococcus is made bacteriostatic; Long and Bliss believe that some unknown change takes place in the streptococci which makes them susceptible to phagocytosis by the leucocytes; Finklestone, et al, state that the sulfanilamide becomes more concentrated within the bacterial cells than in the circumambient body fluids; and Gray and Clark present data from animal experiments to show that sulfanilamide plus serum inhibits the growth of streptococci long enough to allow the large clasmatocytes to mobilize and overwhelm the invaders.

Marshall, Emerson and Cutting have devised a colorimetric method by which the concentration of benzene sulfanilamide in the blood and urine can be determined and its absorption and excretion followed. It has been found, in persons undergoing prolonged treatment with divided daily doses, that, from two to three days are required to establish an equilibrium between the amount ingested and the amount excreted. After this equilibrium is established, it takes about the same time to free the organism of the drug, but the blood concentration can be maintained fairly constant for a long time.

PREPARATION AND DOSAGE

The original "prontosil" is an azo dye, the hydrochloride of 4-sulfanmido-2, 4 diaminoazobenzol, and it is not available in the United States. We have used prontosil soluble (marketed in 2.5 per cent solution by Winthrop under the name, "prontosil") and sulfanilamide (Winthrop's prontylin, other drug houses', sulfanilamide). Our series of cases in comparison with those reported by the large eastern clinics is small; but the various conditions which we have treated fall into most of these groups.

Most writers have based the dosage on the weight of the patient, and have continued their therapy according to the progress of the condition. Long has formulated a method of administering 1 c.c. of prontosil solution for each pound of body weight (up to 120 pounds) per day, divided into six equal parts and injected at intervals of four hours. For patients over 120 pounds this amount is not exceeded; and sulfanilamide tablets are given to the 120-pound patient at the rate of ten grains every six hours in addition to the prontosil solution injections. Sulfanilamide is sometimes used in hypodermoclysis.

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*Read before the Section on Eye, Ear, Nose and Throat at the Seventy-first Annual Session of the Mississippi State Medical Association, Jackson, April 19, 1938.

USE OF SULFANILAMIDE IN THE EYE

Newman used sulfanilamide to treat an epidemic of gonorrheal conjunctivitis affecting eight institutional children, after silver nitrate had failed. The smears became negative five days after the beginning of sulfanilamide treatment and all of the children recovered completely.

Hageman reports one patient with gonococcic ophthalmia, who developed a negative conjunctival smear thirty-six hours after sulfanilamide was started. Several cases of streptococcic orbital cellulitis are presented in Long's articles, which have been benefited by sulfanilamide.

IN MENINGITIS

Meningitis of streptococcic, pneumonococcic and meningococcic origin, of epidemic and post-otitis media types, has been treated in great numbers by sulfanilamide and related compounds. That the literature has more reports on these cases than on any other one condition is undoubtedly due to the more frequent avoidance of the usual fatal consequences. Massive doses have been given in these conditions. Flake and Carey, whenever one of their patients became nauseated from the oral administration, administered prontosil (soluble) parenterally. Suhwentker, Belman and Long report their preliminary observations on the use of benzene sulphonamide in ten cases of meningococcic meningitis. They believe their cases immeasurably benefitted, and report only one death in the group. There are several reports in the British as well as the American literature of recovery from hemolytic streptococcic meningitis and more of pneumococcic meningitis.

Case No. 1: B. S., age 2 months, w. f. Left mastoiditis, ruptured. At operation the infectious process had eroded not only the external mastoid plate, but had continued upward exposing dura mater and there was an active osteomyelitis present. Culture revealed streptococcus and staphylococcus as the invading organisms. Prontosil soluble (2 c.c.) every five hours was given for five days postoperatively. Slight cyanosis developed after first two days of prontosil, and was present for ten or fifteen minutes after injection; the skin was very red over the entire body. Total red blood count decreased to three million, and white blood count to eight thousand after five days of prontosil treatment; three blood transfusions of 100 c.c. each were given and the final result of case was very satisfactory.

Through the courtesy of Dr. W. H. Parsons, of the Vicksburg Hospital, Vicksburg, Miss., two additional cases of meningitis are presented:

Case No. 2: E. C., age 17 years, w. f., who, while being treated for malaria, developed several temporo-frontal reddish spots which extended to a severe erysipelas extending over the scalp, right side of face and right ear, and down into the neck. Her temperature on admission was 103° degrees F., and remained near this level; her red count was three and one-half million, and white blood count thirty thousand. She was given two injections of anti-erysipelas serum and three injections (5 c.c. each) of prontosil soluble during the first twelve hours after admission. The first week in the hospital prontosil (20 c.c.) was given daily and this was followed by prontylin orally. General condition began to improve, and condition of the local lesions of the face and ear showed much recovery. Two weeks after admission, however, she developed dyspnea and auscultation showed a pleuro-pericardial friction rub on all borders of the heart. After several days a metallic tinkle developed on the right side, and x-ray of the chest at this time showed a pneumothorax on the right, apparently due to the rupture of a gangrenous area of the lung. Shortly after this accident, the patient became stuporous, and developed signs of meningeal irritation (stiff neck, positive Koenig) and died on the twenty-fifth day after admission.

Case No. 3: J. M. B., age 2 months, w. f. The baby had been normal in every way until two weeks before admission, at which time it developed a diarrhea of mucus and blood. While being treated for this, bilateral otitis media occurred, but both tympanic membranes were incised, and this condition cleared up. The diarrhea was controlled successfully, but the temperature remained up, and a spinal tap revealed cloudy fluid, and presence of meningococci. For each of the first three days following this procedure, anti-meningococcic serum (15 c.c.) and prontosil soluble (4 c.c.) in divided dosages, were administered and the temperature dropped to 101 degrees F. Prontosil soluble (2 c.c.) was given daily and five days after the spinal tap, meningococcic antitoxin (30 c.c.) was given, but two days later, the temperature again became high (105 degrees F.) and patient expired.

THE SINUSES

The reports on the usage of this drug in diseases of the sinuses are not nearly so numerous, but they too, reflect a favorable opinion. To the reports may be added ours:

Case No. 4: W. S., age 50 years, w. m. Diagnosis: acute streptococcic maxillary sinusitis, right. Puncture and irrigation, rest in bed, ice bag to right side of cheek, and ten grains of sulfanilamide three times daily. The condition had almost cleared up in ten days, but there was a soreness of the scalp and severe headache. On discontinuation of the drug, these untoward symptoms disappeared.

Case No. 5: D. S., age 29 years, w. f. Diagnosis: pneumococcic maxillary sinusitis. Puncture and irrigation, rest in bed and ice bag immediately. Ten grains sulfanilamide three times daily, but after one week the patient became nauseated; so amount decreased to five grains three times daily. After two weeks of treatment, patient recovered.

Case No. 6: R. A. S., age 40 years, w. f. Diagnosis: streptococcic maxillary sinusitis, right, and streptococcic naso-pharyngitis. Besides local treatment to nasal passages and throat, prontosil soluble (5 c.c.) was given intramuscularly daily for three days. At the end of the three days, the condition was satisfactorily controlled.

IN THROAT INFECTIONS

There are many reports tabulated on the effectiveness of this drug. We have treated several such cases:

Case No. 7: R. E. S., age 44 years, w. m. Diagnosis: acute streptococcic tonsillitis. Prontosil soluble (10 c.c.) was administered, followed in two hours by a chill with fever 101 degrees F. This reaction was similar to that of a foreign protein injection, and thereafter streptococcic vaccine was given; recovery was slow. Patient discharged after two weeks.

Case No. 8: E. T. P., age 40 years, w. m. Diagnosis: acute streptococcic pharyngitis. Prontosil soluble (5 c.c.) was administered intramuscularly, and very rapid recovery, with no treatment except locally. Patient refused further administration of prontosil because of discomfort brought on by high fever.

Case No. 9: S. K., age 32 years, w. f. Diagnosis: acute streptococcic pharyngitis, accompanying scarlet fever. Given two injections of streptococcic vaccine in four days. Sulfanilamide (thirty grains a day) was prescribed but the patient was unable, because of nausea, to tolerate this amount. Prontosil soluable was given thereafter. Relief of severe symptoms after two years; discharge after one month.

Case No. 10: M. W., age 40 years, c. f. Diagnosis: acute streptococcic pharyngitis of four days' duration with fever 100 degrees F. Prontosil soluble (10 c.c.) was administered intramuscularly, followed in three hours by loss of fever. In three days showed no signs of disease.

Case No. 11: J. McM., age 25 years, w. f. Diagnosis: acute streptococcic pharyngitis. Sulfanilamide, thirty grains a day, was prescribed, but when patient had taken ten grains, she became so nauseated that she had to discontinue it. She was given streptococcic vaccine and local treatment; entire period of treatment lasted eighteen days.

IN ERYSIPELAS

The reports of treatment of cases of erysipelas have been very favorable. We have treated two such cases:

Case No. 12: C. L. K., age 45 years, w. f., severely attacked by erysipelas of the face. Three injections of serum were given, combined with ultra-violet radiation. This treatment resulted in moderate improvement. On the eleventh day and again on the twelfth, prontosil soluble(two injections of 5 c.c. each) were given intramuscularly. Within three days, all evidence of the erysipelas had disappeared.

Case No. 13: S. T., age 50 years, w. m., while under treatment for acute coryza, developed induration of the cheek which within a few hours turned violently red, presenting a classical picture of erysipelas. Prontosil soluble (5 c.c.) was given intramuscularly, and in twenty-four hours the redness and induration had not increased. Prontosil soluble (10 c.c.)

was then injected intramuscularly and in two hours the temperature had changed from normal to 104 degrees F.; this reaction was quite similar to that of a foreign protein. In forty-eight hours, there was a slight decrease in the amount of induration and inflammation; 5 c.c. were given two days later, at the end of which a point less than 1 cm. in diameter showed inflammation. Sulfanilamide, ten grains daily for five days, were then taken and the patient was entirely cured.

THE TOXIC EFFECTS

It is of utmost importance in the study of any new therapeutic agent to determine its toxic effects as soon as possible. Colebrook and Kenny reported that the "prontosils" had a mildly irritative effect on the kidney, and that their compounds produced sulphemoglobinemia in three of their cases. They stated however, that the association of saline cathartics with the "prontosils" was a contributing factor in the production of sulfhemoglobinemia, and advised against their use. Long and Bliss reported only one toxic effect after prontosil soluble—fever, which they controlled by stopping the drug, but many definite, although milder, toxic effects following sulfanilamide: dizziness, nausea, and sometimes vomiting, which they controlled by keeping the patient in bed; cyanosis occurred in three-fourths of the patients, but they did not consider this an indication for stopping the treatment. The mechanism of the cyanosis, like many other perisulfanilamide factors is unknown, yet it disappeared within a few days after treatment was discontinued.

To counteract the clinical acidosis which may develop, these investigators administered sodium bicarbonate (ten grains) with each dose. Sulfanilamide may, as "prontosil solution" cause a fever; then this drug is discontinued, and the fever will subside if caused by the drug. Sulfanilamide is not excreted rapidly by the damaged kidney, and hence it tends to accumulate in the blood of patients having a decreased renal function.

While Long and Bliss found no evidence of renal irritation caused by sulfanilamide, they believe it best to follow the daily blood level in patients with decreased renal function, and when it reads fifteen to twenty per cent, the drug should be stopped.

It must be borne in mind that damage to the haemopoietic system may be done by the benzene ring, in those people who possess an idiosyncracy to the drug. In our own experience, we have encountered mild toxic effects: general malaise, headache, nausea, diarrhea, and pyrexia; our meningitis cases had slight cyanosis. All of these subsided on decreasing or discounting the drug.

SUMMARY

A brief history of sulfanilamide is presented, with a general outline of its use in eye, ear, nose and throat conditions. Thirteen of the author's cases are presented. Although the result in every case was not satisfactory, there can be little doubt sulfanilamide possesses much merit. Branham, Rosenthal, and Bauer, of the National Institute of Health, have shown the value of sulfanilamide and have quite recently published their reports on various derivatives of sulfanilamide, such as sulphamino-diamino-diphenyl. Their experimental results portend even more satisfactory therapy, and we may well believe that we stand on the threshold of a great stride in modern medicine. Sulfanilamide, possessing a short and not too-unfavorable past, enjoying a very pleasant present, may look forward to an even brighter future.

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DISCUSSION

Dr. D. W. Hamrick (Corinth): Dr. Callahan has brought to us a very timely and well prepared discussion of a subject we should all be interested in. I do not believe that sulphanilamide should be used routinely in all infections, but do believe it has a very definite place in certain infections of the eye, ear, nose and throat. I have given prontylin by mouth in many cases of severe streptococcus tonsillitis with uniformly good results. I gave it in one case of severe periostitis of the ear canal in which there was marked swelling in front of the ear extending to the eyelids, with dramatic results. One of my associates and I gave prontosil. All severe cases of otitis media with early mastoid involvements were given the drug and I believe this past winter it has very materially cut down the number of mastoid operations necessary. I have had no experience with the drug in the eye or sinus infections.

As to mode of action there is a diversity of opinion. Osgood's work on human marrow cultures seems to indicate that the major action of the drug is in neutralization of toxins and a decrease in the rate of bacterial cell division, and has no direct effect on phagocytosis.

The effective concentration of the drug seems to be as low as 1 to 100,000, instead of 1 to 1,000 as ordinarily used. Prontylin seems to be more effective in his experiments than prontosil. Bigler and his associates find that the drug produces a leucopenia, but not an actual granulocytopenia except in rare individuals with an idiosyncrasy to the drug. Marshall's work on dogs seems to show that there is no cumulative effect from long use of the drug.

I have personally taken 60 grains a day of the drug over a period of 3 days, to determine its effect on general well-being, and experienced a moderate dyspnea, no cyanosis, a rather marked feeling of malaise, and a mild tinnitus.

Dr. Hugh H. Johnston (Vicksburg): Because of the newness and hopeful future for prontosil, I have been most interested in Dr. Callahan's paper, dealing with the history, theories and his results derived from it's use.

I regret to say that I cannot lend a great deal to the subject because of my limited experience. Not long after I began to study and experiment with sulphanilamide and prontosil, many deaths were caused over the state from the use of the "elixir" and patients would not consent to its use in any form.

Even knowing the vast difference between the tablet form and prontosil soluble from the elixir, I too believe it a mistake to use the drug indiscriminately. It is still, at best, in the experimental stage and one should carefully ascertain first whether the illness is severe enough to warrant the risk of an experiment.

According to reports, it works very well in some diseases of an acute type, but should be regarded only in the light of an emergency measure until it has been further proven.

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Manuscripts and all material for publication should be addressed to the editor, P. O. Drawer 231, Vicksburg, Mississippi.

EDITORIALS

JANUARY

Janus was invoked at the commencement of most actions; even in the worship of the other gods the votary began by offering wine and incense to Janus. The first month in the year was named after him; and under the title of Matutinus he was regarded as the opener of the day. Hence he had charge of the gates of heaven, and hence, too, all gates, **Januae**, were called after him, and supposed to be under his care. Hence, perhaps, it was, that he was represented with a staff and key, and that he was named the Opener, and the Shutter.—M. A. Dwight, **Grecian and Roman Mythology.**

That blasts of January
Would blow you through and through.
—**Winter's Tale.**

Now the New Year reviving old Desires,
The thoughtful Soul to Solitude retires.
—Omar Khayyam.

HAPPY NEW YEAR!

THE POSSIBILITIES OF THE COUNTRY DOCTOR

Often we hear of the hardships of the country doctor. In this day of the specialist, many people are prone to think the country doctor is no longer adequate for any purpose. Some country doctors themselves seem to share and encourage this opinion. This we attribute to a lack of vision on the part of the doctor who entertains such views. The rural physician, of course, has his sphere. And his function is certainly not that of the specialist, but his opportunity for service and profit were never greater, if he only were awake to the facts. The country doctor can increase his efficiency and service to his clientele, and consequently his profits, if he were only awake to the importance of modernizing himself and his equipment a little more each day. We know this to be true, because we know of a few very striking examples.

One of the most impressive examples of this that we know of is a country doctor in one of the most rural counties in this state. He is Dr. Frank L. Brantley of Madden in Leake County. Madden is sixteen miles southeast of Carthage, and eighteen miles southwest of Philadelphia. Dr. Brantley was born and reared here, and has practiced his profession here since his graduation from the University of Tennessee College of Medicine in 1914. His success during these years as a physician and a citizen has been remarkable. By careful study of current medical literature, and by adding new books to his library he has kept abreast with the times reasonably well. By close application to his work, he has served his people well as a physician, and there is hardly a worthwhile institution or utility in this community that does not bear the imprint of Dr. Brantley's efforts and support. And there is a goodly number. Modern schools, churches, better roads, rural electrification and improved farming conditions have made Madden one of the most progressive and habitable communities in this state. Dr. Brantley has had a leading part in nearly every one of these improvements. Besides these, he rarely misses the important medical conventions.

But, I am a long time getting to the real essence of the story. The object of this is not to boost the doctor. He needs no boosting. He has an extensive practice, and has acccumulated considerable property as a result. In fact, his work had reached such proportions several years ago that he found it advisable to induce a young man to come and locate in competition to himseif. The idea we are trying to convey is the possibility of the country doctor. And here it is: Dr. Brantley has only this year built and equipped a clinic that would adorn any urban locality, and many specialists in thriving cities are not so well equipped.

This clinic, located across the road from Dr. Brantley's splendid country home, is a modern brick structure, with electric current and running water. On the right as one enters, is the waiting room for whites. Passing in from it is a bed room with a modern hospital bed. Next is a well equipped bath room; then another bed room. In the center is the consultation room and to the left of that is the colored waiting room. On this side is a bath room and one bed room equipped. In the center is a large examining room, while to the rear and right is a smaller treatment room for white people. To the left is one for the colored. No minor details have been omitted to make this a modern clinic, and it is certainly a credit to its builder, as well as the community. Dr. Brantley's explanation for such an adventure is very plausible. He says the clientele that made such a structure possible surely would support it. It is being well supported.

As above stated, this is no effort to boost a friend, but an effort to show that the possibilities of the country doctor are growing, just as they are for his urban neighbor. And the one who keeps himself and his equipment abreast with the times will not only render a more laudable and efficient service, but will be in a position to reap a just reward. The rural section *will* support modern medicine.

Carthage, H. H. Puryear,
November 28, 1938.

CONGRATULATIONS

On December 13, Dr. and Mrs. C. D. Mitchell, Whitfield, celebrated their golden wedding anniversary. Dr. Mitchell is superintendent of the Mississippi State Hospital and a past president of the Mississippi State Medical Association.

May happiness attend many more anniversaries!

HARBOR LIGHTS

The Tulsa Gasser observes that there are three things a man needs in order to realize the fullness of life and its meaning.

First, a faith which shall carry him through every storm without fear or despair.

Second, a goal in life which, like a beacon light, shall always shine in the distance, and which, like a magnet, shall draw him to it, irresistibly.

Third, a sense of humor, which shall teach him to establish right values. Having this, he will learn to win and also lose, and he will know that both are life - that one cannot be without the other.

SMALL CHANGE

"Getting rattled is often an indication that there is a screw loose somewhere."

* * * *

"What's your favorite book?"

"It has always been my bank book - but even that is lacking in interest now."

* * * *

"When you find a man who is sad, the chances are he is thinking of himself."

* * * *

"Happiness is like jam in the hands of a small boy. You can't spread even a little of it around without getting some of it on yourself."

MISSISSIPPI STATE BOARD OF HEALTH

The fight of the State Board of Health against quackery goes on! Progress against illegal practitioners during the past year is like that of the famous "Pilgrim,"—full of obstacles. Where law enforcement breaks down, laws are of little avail, and conviction of quacks will be obtained only when juries and judges realize the great menace of quackery to the life and health of people in their communities.

Education is the force by which this realization will come. Physicians have excellent opportunities to impart authentic, personal information about quackery, and their efforts towards this end are requested for their own good as well as their patients' welfare. Pamphlets on the subject are available for office distribution from the State Board of Health.

Following is a report on illegal practitioners for the first eleven months of 1938:

January 3. — **Donald Cooper**: Old case, brought to trial but failed to indict.

January 15. — **Joeb Sims**: Charged with practicing medicine without license. Convicted in J. P. Court, Sandersville, Mississippi; fined $100 and sentenced to four months in jail. Convicted January 15, 1938.

February 9. — **W. A. Barkman**: Posed as a representative of the State Board of Health. Represented himself as agent for rat and roach poison. Obtained a letter from Dr. F. M. Smith, County Health Officer of Warren County, and changed this letter to suit his program. Was charged with obtaining money under false pretenses. Tried and convicted February 9; fined $75 and sentenced to thirty days in jail. Case tried in city court, Vicksburg.

February 17. — **Dr. R. R. Pope**, Gulfport: Charged with illegal practice of medicine. Engaged in treating cancer. Convicted in county court on February 17. Fined $100 and sentenced to thirty days in jail.

February 21. — **C. H. Rose**, Belzoni: Charged with practice of medicine without license. Tried in J. P. Court and found "not guilty." Affidavit made immediately on another charge. He has since left Belzoni; probably located at Columbia.

March, 1938 — **E. M. Joyner**: This man engaged in the practice of medicine, although he claimed to be a chiropractor. He was tried in circuit court at Laurel, November, 1937. Was convicted, fined $200 and six months in jail, but appealed. In March, 1938, the Supreme Court affirmed the decision of the lower court, and at the same time ruled that chiropractors are limited in their practice, to the use of their hands on the spinal column.

March 15 — **A. G. Spencer**, Vicksburg: Practicing medicine and running a drug store at Vicksburg. Had been indicted several times by Dr. Smith, county health officer. Is now to be tried in county court. Case pending.

April 2 — **Harry Hannon**: Convicted for practicing medicine without license before Justice McGehee, Brookhaven, on April –. Case appealed to circuit court.

April 12 — Mr. Q. E. Gatlin and Mr. Z. E. Oswalt of the State Board of Health applied to Chancellor Williams at Vicksburg for injunction against Harry Hannon, and the injunction was granted. This will be tried before Chancellor Stricker at a later date.

April 14 — **R. E. Kemp**: Charged with practicing medicine without license. Convicted and fined $100 and cost, or ninety days in jail, by circuit court, Montgomery County, Winona, Miss.

May 4 — **Charles B. Byrd**, Wiggins: This man compounded drugs and made a linament that he claimed would cure arthritis. Two cases found but no charges made on either.

May 19 — **Dick Murry**, Raymond: Charged with practicing medicine without license. Case to be presented to county attorney or district attorney. No court action to date.

May 10 — **Dr. Phillips**, alias **Dr. Philip Hoffman**, Meridian: He treated Negro women by packing and prescribing medicine; practiced without license. "Jumped bond" before date of trial. Case of manslaughter against him, if and when he is apprehended.

During the months of May and June three attempts were made to try Harry Hannon in Jackson, but each time the trial was postponed.

June 7 — **Harry Hannon**: Charged with practicing medicine on a Mr. Jones in Jackson. Witness was sick and unable to appear. Case set up for June 16. It was thought that men had been selected for jury service favorable to Hannon, so case was transferred to another justice of peace court. This case was tried in Judge Calhoun's court. A jury gave an acquittal.

June 9 — **Louis Wilbert**, Negro: This Negro was doing surgery and medicine. Removed a tumor from Negro woman. The Negress died of blood poisoning. Tried before justice, was convicted and fined $100 and thirty days. He appealed to county court.

June 14 — **C. H. Rose**, Columbia: Investigation was made of this man's practice. It was found that his practice consisted largely of sweat box and hot towel treatments. Information was given to Sebe Dale, district attorney, but no action reported.

June 22 — **Wash Harris**, Como: This Negro is engaged in the general practice of medicine. He treated C. R. Morgan (white) for kidney trouble, Sara Bruce for heart trouble. These people live out from Como and both paid Wash Harris money. Information was given to the district attorney at Senatobia, but no action reported to date.

June 23 — June 24 — **J. C. Taylor**, (Naturopath): Claims to be using only herbs. Three cases obtained against this Negro and County Attorney Edd Green prosecuted this case at Merigold. The sheriff's office had sold this Negro a privilege license to practice naturopathy and the jury gave this as a reason to acquit him.

July 13 to 20 — **J. H. Spencer**: Treating patients for syphilis. A good case as there was evidence that Spencer had given medicine by use of a hypodermic needle. The defense spent a whole week on motions to quash on constitutional grounds. He made the point that no Negroes were drawn either on grand or petit juries. The judge overruled all motions and ordered trial. Spencer was convicted of practicing medicine without license and fined $200 and ten months in jail. His lawyer appealed the case to the State Supreme Court. This case will probably be heard in Dec. 1938.

July 25 — **Jessie A. Williams**, Clarksdale: This Negro was engaged in the general practice of medicine. A good case was made out before justice court. He was fined $100 and cost of court. The fine was held up provided he quit practicing medicine.

September 22 — **Louis Wilbert**, Clarksdale: This case was appealed from a conviction in justice court. Was charged with removing a tumor from a Negro woman. He was tried in county court, convicted, and sentenced $100 and thirty days in jail. This stuck.

November 23 — **J. J. Jones**, B.S., M.D., D.-D.S., Negro: This Negro (of Indianola) was engaged in general practice. He used lard, turpentine, camphor, externally, and gives some kind of concoction internally. He was treating an old Negro who had had a stroke. This case was tried in justice court and a conviction was obtained. He was fined $100 and cost. Being unable to raise the cash, he is still in jail.

In addition to the above, Dr. R. N. Whitfield and Mr. Z. E. Oswalt made investigations of all persons seeking to qualify under the podiatry act. Quite a number of applicants were shown to be trying to qualify by falsification, and licenses were refused them.

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Since 1933 forty-three cases of endemic typhus fever have been discovered in Mississippi. Of these, two were found in 1933, five in 1935, eight in 1936, fifteen in 1937, and thirteen through October, 1938. For several years large numbers of cases of typhus fever have been found in Alabama and Texas, and there is reason to believe that the disease is more prevalent in Mississippi than is known. Practically all of the cases located to date were thought to be typhoid fever early in the disease. Diagnosis in most of these cases was confirmed by a positive Weil-Felix reaction.

Counties in which these cases have been found are Rankin, Harrison, Lauderdale, Jackson, Hinds, Scott, Pike, Panola, Warren, Kemper, Pearl River, Newton, Marion, Madison, and Covington.

The disease usually begins with headache, chill, fever, general pains, and a macular eruption on the fifth or sixth day. The eruption usually occurs on the lower part of the chest and the upper part of the abdomen, and it is frequently found on the medial surfaces of the arm. Diagnosis may be confirmed by collecting a tube of blood for agglutination. The agglutination usually does not become positive until the eighth or tenth day after onset.

Since the disease is transmitted by the rat flea, it is more commonly found in persons who are engaged in food or feed handling or some other occupation which brings them in close association with rats. Physicians are urged to report their cases to the State Board of Health.

The third annual meeting of the Mississippi Public Health Association is scheduled in Jackson, Dec. 8-9. Appearing on the program are many outstanding speakers including Dr. Abel Wolman, President-elect of the American Public Health Association and professor of sanitary engineering at Johns Hopkins; Miss Purcella Peck, editor of Public Health Nursing Journal, New York; Dr. John Collinson, Bureau of Census, Washington; H. N. Old, Sanitary Engineer in charge, U. S. Public Health Service, New Orleans; Miss Donna Peace, Regional Nurse, U. S. Public Health Service, New Orleans; Miss Pauline B. Williamson, Chief, School Health Bureau, Metropolitan Life Insurance Company, New York; Dr. Estelle A. Magiera, psychiatrist, Mississippi State Hospital, Whitfield; and Dr. Maxwell E. Lapham, director, Medical Extension, Tulane University, New Orleans.

Mr. H. A. Kroeze, director of sanitary engineering, State Board of Health, is president of the association; Dr. F. M. Smith, director, is president-elect; Dr. J. A. Milne, Director of Warren County Health Department, Vicksburg, is president-elect; Dr. J. A. Milne, director of County Health Work, is secretary-treasurer.

Together with the Central Medical Society, members of the Mississippi Public Health Association are viewing the film, "The Birth of a Baby," on December 9.

* * * *

During October, November, and December, the State Board of Health has conducted a pneumonia campaign designed to reduce the large number of deaths from this disease annually in Mississippi.

Education of the layman regarding what is known of the prevention of this disease and the value of calling in the family physician early in its course has been the cornerstone of the campaign. Co-operating agencies have been the American Legion, the American Legion Auxiliary, and the commercial theatres of the state, 95 per cent of which showed the pneumonia film, "A New Day." The Legion assisted by means of publicity and transmitting the film from town to town, the Legion Auxiliary by means of study clubs on pneumonia.

Seven pneumonia reels have run simultaneously in the state, the last one completing its circuits December 24.

* * * *

In the name of several national health organizations, Dr. Underwood attended conferences in Washington, New York, and Oklahoma City during November. On November 8 he attended meetings of the Commonwealth Fund Board of Directors in Washington. He took part in the Health Education Conference of the National Education Association in New York on November 9, representing the State and Provincial Health Authorities of North America, of which he is president. On November 10, he conferred in New York with Rockefeller Foundation officials, of which he is a member of the board of directors. At the Southern Medical Association convening in Oklahoma City, November 15-18, Dr. Underwood spoke before the Conference of Presidents, Presidents-elect, Secretaries, and Editors of the State Medical Associations on "The Apparent Need for More Adequate Medical and Hospital Care."

On November 1, Dr. Underwood attended a birthday dinner of the Mississippi Federation of Women's Clubs, Jackson. The health work of this club over a period of many years was reviewed by Dr. Underwood.

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On November 4, Dr. Underwood and Dr. J. A. Milne, director of county health work, visited the Jones County Health Department, Laurel, where they discussed the program with Dr. A. R. Perry, Director.

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Dr. Isadore Dyer, consultant obstetrician, Oklahoma State Board of Health, spent three days in Mississippi during November studying the maternity program in this state. Part of the time was spent in the central office and part in Pike County, where nursing service at time of delivery is available to physicians.

The Central Medical Society has volunteered the services of surgeons in giving collapse treatment by means of pneumothorax to tuberculous cases in Hinds County for whom this form of therapy is applicable. Pneumothorax and fluoroscope equipment was purchased by the Hinds County Tuberculosis Association and will be kept at the Hinds County Health Department.

More than 800 cases of tuberculosis exist in Hinds County alone with Sanatorium facilities for less than 50 at both the state and county sanatoria. It is felt that the ambulatory pneumothorax program will be of great value in tuberculosis control in Hinds County.

* * * *

Dr. H. C. Ricks attended the meeting of the Southern Medical Association in Oklahoma City, discussing a paper on undulant fever by Dr. Royall M. Calder of San Antonio, Texas.

Dr. Underwood has accepted the invitation of National Foundation for Infantile Paralysis Research to serve as chairman of the President's Birthday Ball for 1939. In 1935, 1936, and 1937, 70 per cent of all proceeds were sent to Warm Springs Infantile Paralysis Foundation, 30 per cent being retained by the State. In 1938, 100 per cent of the proceeds of the celebration were sent to the new Poliomyelitis National Foundation. It is gratifying to the chairman to have the counties put on celebrations retaining for their own purposes and use 50 per cent of the funds raised after expenses are paid.

* * * *

The State Hygienic Laboratory is co-operating with the United States Public Health Service in the nation-wide study of local efficiency in sero-diagnostic tests for syphilis. About 300 specimens will be examined in each laboratory taking part in the national experiment. Reports submitted to the Public Health Service will be compared with those of originators of the sero-diagnostic tests. Control examiners are located at strategic points throughout the United States.

* * * *

Recent additions to the State Board of Health staff include two medical officer trainees, Dr. T. K. Chandler, Jr., of West Point, Miss., and Dr. John W. Evans, Jr., of Bells, Tenn.

Dr. Chandler is now located in Forrest County where he is relieving Dr. Blackwelder who is attending the course in the diagnosis and management of syphilis at Vanderbilt University Clinic. Dr. Chandler received his medical education at the University of Mississippi and the University of Tennessee. His experience includes one year's interneship at Western State Hospital, Bolivar, Tenn., one and a half years as resident physician at the Tennessee State Prison, and two years' private practice at West Point.

Dr. Evans is now in McComb where he is understudying county health work under the direction of Dr. T. Paul Haney, Jr., Director of the Pike County Health Department. Dr. Evans received his medical education at the University of Tennessee, interned at Morningside and Sisler Hospital, Tulsa, Oklahoma, and has spent several months as surgeon in a CCC camp.

* * * *

Staff Conferences during November were held by Dr. H. B. Cottrell, director of Field Unit, and Dr. George E. Riley, assistant epidemiologist.

Dr. Cottrell called the field unit "a floating health department," the aim of which is to maintain uniform practices and procedures in local health units. Members of the Field Unit work is an advisory rather than supervisory capacity, he said.

Dr. Riley discussed the recent typhus fever outbreak in Mississippi, and other insect-borne and parasitic diseases prevalent in the state. He pointed out in death figures the importance of malaria as a disease menace—an average of 4,100 per year during the past three years in fourteen Southern states.

Mr. Thomas T. Brackin, Jr., medical entomologist in the Division of Preventable Disease Control told of a study being made showing the relationships between the fly and bacillary dysentery. No conclusions have yet been reached, he stated.

* * * *

The WJDX radio program at 9:30 each Saturday morning as follows during November:

November 5. Mrs. Ruth A. Zercher, executive secretary, Hinds County Chapter, American Red Cross, Jackson, Miss.—"In the Name of Humanity."

November 12. Dr. R. N. Whitfield, Director, Division of Preventable Disease Control, State Board of Health, Jackson, Miss.—"The Ups and Downs of Diphtheria."

November 26. Dr. Felix J. Underwood, Executive Officer, State Board of Health, Jackson, Miss.—"Hot School Lunches."

Jackson, Felix J. Underwood,
December 7, 1938. Executive Officer.

INTERPRETING MEDICAL LITERATURE
RADIOLOGY and ROENTGENOLOGY

Karl O. Stingily, Meridian

Radiation Therapy of Chronic Mastitis, Howard C. Taylor, Jr., and Robert L. Brown, *American Journal of Roentgenology and Radium Therapy*, 40:4 (October) 1938.—One of the most difficult problems the pathologist and clinician has to consider is well discussed by these authors. Their views are conservative, yet enough work has been done to give a well formed basis of opinion. The authors lay no claim to benefits in radiation therapy in the Schimmelbusch type, but base their whole observation on the mild diffuse types with pain and nipple discharge, those cases where surgery is not justifiable, but they warn above all else in a discreet nodular type always to take biopsy.

There are two clinical types to be considered:

1. Those cases in which pain is a predominant symptom, breasts hypertrophied and diffuse nodularity in the outer quadrants. Soreness is a constant symptom and increases before menstruation.

The direct application of radiation to the breasts causes vascular, terminal sensory organ, and epithelial changes. This dosage must be great.

The second theory is the indirect method of applying radiation to the ovaries, thus causing artificial, temporary or complete menopause, depending upon age, etc. This requires relatively small dosage.

Of the cases treated by direct irradiation over [illegible] per cent showed cures or improvement. Of the cases treated by indirect irradiation about 99 per cent were cured or improved and only one patient had no change. Thus, it is evident the indirect approach is by far the best where possible.

The authors feel in well selected cases no hesitancy should be made in therapy of this type.

The Significance of the Lateral View of the Breast, Samuel A. Robbins and William S. Altman, *American Journal of Roentgenology and Radium Therapy,* 40:4 (October) 1938.—Anything which will reduce the error of diagnosis is certainly a valuable adjunct in medicine. Roentgenographic examination of the rectum and sigmoid has been very unsatisfactory due mainly to its inaccessibility to palpation. In anterior-posterior radiography alone only two small planes of this organ are visualized. Most roentgenologists, who do any other procedure, usually only take one semi-lateral view.

The authors of this paper have pointed out very startingly the errors in too few pictures and the significance of lateral views. It behooves everyone doing gastro-intestinal work to give barium enemas as routine procedures; to take roentgenograms in both the anterior-posterior and lateral planes and if any significant facts are noted to take stereograms under rapid technique. This procedure is particularly true where small lesions are suspected on either the front or back of the sigmoid or rectum.

December 1, 1938.

SURGERY

A. Street, Vicksburg

Adherent Posterior Duodenal Ulcer, J. W. Hinton, Archives of Surgery, 37, 944 (December) 1938.—During the ten-year period reviewed, there were 864 peptic ulcers observed in the Gastro-Enterologic Clinic of the Fourth Medical and Surgical Divisions of Bellevue Hospital. Eighty-eight per cent of the ulcers were duodenal in location. None was referred for surgical treatment unless it was found impossible to relieve the symptoms by medical means. Only 10 per cent were referred for operation.

It was observed that only 37 per cent of ulcer patients treated by gastroenterostomy were relieved of symptoms, and that 16.4 per cent of gastro-enterostomized patients showed marginal ulcers. Since 1933, the author has done subtotal resections exclusively for patients suffering from duodenal ulcer. Since that time, to October 1, 1937, 64 patients have been operated upon. Sixteen patients had been operated upon previously. The remaining 48 patients were treated by primary subtotal resection. Fifty-four per cent of them showed a posterior ulcer and definite chronic pancreatitis. The duodeno-hepatic ligament was also frequently involved in the inflammatory mass. Twenty-one per cent showed more than one ulcer, one ulcer showing anteriorly and one ulcer located posteriorly being demonstrated by operation. Seventy-five per cent of the patients showing anterior or posterior ulcer, or both, had definite inflammatory disease of the pancreas.

The reason for operation was pain in 81 per cent, multiple massive hemorrhage in 91 per cent.

With the advent of pancreatic inflammation, there has been a change in the pain syndrome. The pain may become severe and the radiation change to the back, either to the right or left of the spinal column. This pain may suggest renal calculus or cholelithiasis.

Definite pyloric obstruction was present in 15 per cent of the 48 patients.

The operation consisted of subtotal resection, with complete removal of the ulcer and inflammatory mass from the pancreas or duodeno-hepatic ligament. The complete removal of the mass is strongly emphasized.

Mortality for the 48 primary subtotal resections was 4.1 per cent. For the 16 patients whose stomachs had been subjected to previous surgery, there was a mortality of 31 per cent; for the entire series of 64 cases, mortality of 10.9 per cent.

Comment: There is apparently no mention of the postoperative course and clinical results among the patients who were fortunate enough to survive subtotal gastrectomy with thorough removal of the inflammatory mass from the pancreas and gastro-duodenal ligament. Marginal ulcers are known to occur at the site of anastomosis after subtotal gastric resection, as well as after gastro-enterostomy. When marginal ulcer does occur following subtotal resection, the problem of what to do next is even more difficult than when dealing with marginal ulcer complicating gastro-enterostomy.

The reviewer does not feel that the surgery of duodenal ulcer can be confined to one type of surgical procedure, but that the surgical procedure to be used should be selected after careful evaluation of the factors presented by each individual patient. Some of these factors are: amount of free hydrochloric acid present, amount of obstruction present, age of the patient, general condition of the patient, amount of inflammatory mass present, and other factors making the patient more or less operable. Marginal ulcer is likely to form when free acid is high, and unlikely to form when free acid is low, as it occasionally is when the pylorus has been more or less obstructed over a long period of time.

Acute Adrenal Cortex Exhaustion and Its Relations to Shock, F. R. Reed, American Journal of Surgery, XL, 514 (June) 1938.—The blood in Addison's disease and in adrenalectomyzed animals show decreased sodium and chlorine, increased non-protein nitrogen, and decrease in plasma of the blood stream. These changes increase as death approaches. The clinical picture includes asthenia, progressive weakness, falling blood pressure, pigmentation, edema, failing kidney function, anorexia, nausea, vomiting, dyspnoea and, finally, come and death.

Acute conditions, clinically similar, except for the lack of pigmentation, are often seen in medical and surgical practice, usually resulting from acute infectional disease, traumatic shock, or both.

The cause of shock may be traumatic, toxic, psychic (pain), or anaphylactic. .

In shock, the sympatheticoadrenal system is quickly affected, producing vasoconstriction in all locations in the body except the heart and skeletal muscles. There is an enormous outpouring of plasma from the dilated capillaries of the skeletal and heart muscles into the spaces between the muscle fibers. This results in lowering of blood volume, and there is also lowering of blood sodium and chlorine, increased non-protein nitrogen, and lowered blood pressure.

Repeated injections of adrenalin, in sufficient amount, have been demonstrated to produce the shock syndrome.

The changes in blood chmistry and in distribution of blood volume seen in shock are similar to those seen in adrenal cortical insufficiency occurring in adrenalectomyzed animals or in advanced Addison's disease and, as before stated, can be prevented by administration of sufficient amounts of adrenal cortex extract. Because of the similarity of the shock syndrome and the adrenal cortex deficiency syndrome, the author began to use adrenal cortex extract in the treatment of surgical shock and of patients with severe infections, preventing shock manifestations in severely burned patients and in patients being prepared for extensive surgical procedures. Results reported are excellent.

The dose used in preparation for operation was 1 to 2 c.c. given intramuscularly eight to eleven hours before operation. In treatment, 4 to 6 c.c. was given intramuscularly every twenty-four hours. This treatment did not replace the other usual supportive measures, such as intravenous fluids and minerals, transfusion, etc., but was given in addition.

December 15, 1938.

PEDIATRICS

Harvey F. Garrison, Jackson

The Dangers of Tuberculosis in Childhood. A Study of Hospital Mortality, Clement A. Smith, New England Journal of Medicine, 219: 260 (August 25) 1938.—Analysis of a hospital series of 345 deaths from tuberculosis among infants and children has yielded the following important observations:

"1. Tuberculosis mortality in infancy and childhood is rapidly decreasing.

"2. Mortality is highest during the first two years of life (58 per cent of the deaths). It declines during the next five years (35 per cent of all deaths) to reach a low level in the five years from 7-12 (1 per cent of all deaths).

"3. Deaths in infancy are usually due to miliary tuberculosis, with or without an associated tuberculous meningitis. Deaths in infancy often occur in the presence of an active and advancing pulmonary tuberculosis. Abdominal tuberculosis although rarely seen in recent years, is a much more frequent cause of death at this age than in later childhood.

"4. Deaths in older children are most often due to a tuberculous meningitis not associated with miliary dissemination to the rest of the body. Such a condition was responsible for death in seventy-five per cent of fatalities between the ages of 7-12. Fatal pulmonary tuberculosis of the adult type is extremely rare in children at this age. No death from active abdominal tuberculosis occurred among them.

"From the foregoing analysis of mortality, certain deductions can be made concerning the proper management of the tuberculosis problem in the ages studied. In infants it seems justifiable to regard fatalities as the results of rapidly progressing and spreading infections rather than trying to control them is obvious, as is the desirability of safe-guarding the infant from further infection after the first seeds have been sown. However, infection in infancy is not so frequently fatal as was once supposed. Also, when children infected in infancy die of tuberculosis, this termination usually occurs within a year after the infection is first discovered.

"In older children the situation appears to be characterized by a type of danger different from that which threatens the infant and the young child. Although the wisdom of preventing infection and superinfection must be stressed for the older child as well as for the infant, the comparative infrequency of fatalities between six and twelve indicates that very rarely in such children is death from tuberculosis to be considered a serious and immediate threat. The pathologic process in most of those who succumb at this period of life is apparently due to the rupture of a previously unsuspected central nervous system focus. Such a fatal termination has at least some of the characteristics of an unpredictable accident. The management of the tuberculous child in this age period, should be interpreted with this fact in mind.

"In spite of efforts for prevention, a certain number of children will continue to become infected and a very small number of them will develop central nervous system foci. However, one cannot diagnose the presence of such lesions in the living and apparently healthy child, except in the rare event of calcification sufficient to appear roentgenologically. Nor is there any proof that such lesions even though their presence is proved. can be prevented from rupturing by a sanatorium regimen. Older children in whom death was brought about by this train of events did not show manifestations of impaired health before the onset of meningitis. Thus it would appear from these facts that if one believes it possible to restrain a sudden invasion of the meninges by a sanitorium regimen he might justifiably advise such treatment for any older children who reacts to tuberculin.

"Fatal pulmonary tuberculosis has been so rarely seen in older children as to make it of doubtful value to restrict the activity of a child because of roentgenologic findings in the chest, unless very definite changes (parenchymal) are present. Moreover, if clinical signs and symptoms accompany roentgenologic changes in the lungs at this age," the writer urges the careful consideration of a non-tuberculous as well as a tuberculous etiology.

Thus he considers it very rarel ynecessary "to restrict the activity of any grade school child because of the immediate threat of tuberculosis. But if a child with unequivocal evidences of infection is allowed to lead an unrestricted life, may this render him prone to develop tuberculosis during and after adolescence? Can the incidence of tuberculosis in the teens be reduced by extra care during childhood?"

Myers. Harrington, Stewart and Wulff answer these questions as follows:

" 'All children reacting positively to the tuberculin test should have films made of the chest periodically, beginning at about the age of ten or twelve years—when chronic lesions of re-infection type make their appearance, in the lung so as to be easily detected by the x-ray film, there is usually a long time, often two or more years before symptoms develop. During this period, most cases can be treated successfully, and many of them when adequately treated, do not become open cases. We believe it is far more satisfactory in every respect to keep the potential cases under close supervision in their homes—than to provide treatment for the first infection type case'."

"While a restricted life is rarely indicated for the usual type of tuberculosis in older children, this does not in the least mean that they should be dismissed from the attention of the physician without proper management of the immediate situation and a proper plan for the future. The immediate situation requires a study of the child's household for the presence of tuberculosis. The application of the tuberculin test is such a simple procedure that there is no excuse for failing to utilize it to this end. All positive reactors in the family should of course be studied by roentgenograms. By this means, the immediate surroundings of the child may be freed from contact. and unsuspected or improperly treated tuberculosis may be brought to light.

"When the child's immediate surroundings have been 'accredited,' the further duty of the physician is to impress upon the parents the importance of annual roentgenological examination of the patient as he passes into and through adolescence. This should by all means be all the more urgently advocated if the patient's roentgenogram shows scars of many or large lesions, or if the family will not co-operate in the breaking of contracts. If the physician or the clinic will not only arrange such a concrete program but will also see that it is carried out, the results will be far more satisfactory than those following the dispensation of vague advice concerning rest and fresh air.

"The discovery of tuberculosis in an infant should be followed by immediate and exacting measures toward conserving the patient's health and strength. Usually this means sanatorium care or its equivalent in supervision at home. After the third year of life, these measures may be gradually relaxed. The discovery of tuberculosis at any age calls for immediate measures to find and break dangerous contact. The infected child always represents a clue to the potential presence of disease in the household circle. Often the investigation of the family represents the greatest responsibility of the physician."

Comment: The above article on the dangers of tuberculosis in childhood, covers the subject in a most excellent way. I felt that this article would be of considerable interest to the medical profession of this state. I sincerely trust that every practitioner of medicine in the State of Mississippi will read this article.

December 7, 1938.

EYE, EAR, NOSE and THROAT

Alston Callahan, Vicksburg

Reading Difficulties in Children, George E. Berner, and Dorothy E. Berner, B.S., (Educ.), *Archives of Ophthalmology* (Nov.) 1938, p. 829.—There are two factors of modern educational procedure which send more children than formerly to the ophthalmologist's office. Methods of teaching reading have changed, and the newer method requires a clearer span of visual attention but results in ability to read rapidly. Many years ago, children were taught the letters of the alphabet by their sounds, and later taught how to combine the individual letters into words. Then, after learning these words, he learned the family of words and constructed a vocabulary. Now, however, the child, immediately on entering school, learns to read whole sentences which express facts and actions familiar to his experience. The analysis of the sentence into individual words and the analysis of the individual word into phonic sounds are taught as a secondary matter, when the child is already reading an extensive vocabulary based on visual memory rather than on the synthesis of sounds. The other factor is that children are now required in most states to remain in school until the age of eighteen where formerly they were dismissed to the industrial world at fourteen. Therefore, the child is in classes longer and a greater demand is placed on his eyes.

Because of the high degree of visual attention required, certain minor difficulties that were of less importance under old methods of teaching have now become significant:

VISUAL IMMATURITY

Many children at six do not have a mature retina but develop it at the age of seven or eight. This factor is often overlooked in children just beginning school.

LOW HYPERMETROPIA

Low hypermetropia of children have an abundance of accomodative power but because of lack of practice they have not learned to use it with perfect ease and lack of conscious effort.

DEFICIENT FUSION

Many children have better vision in one eye than in the other and they receive a clearer mental impression when only the best seeing eye is used. Often this is a cause of squint, for the child suppresses in order to keep from seeing blurred images.

In correcting these difficulties the first step is careful refraction under atropine; the second is restoration of normal binocular habits by orthoptic training and the remaining is in the actual process of reading and should be in the hands of a skilled teacher.

The method now used in the early classes produces more excellent readers and fewer "word" readers, but it is evident that more children will need visual aids.

Advantages of Use of Coagulants in Ocular Operations, Archimede Busacca, *Arch. Ophth.* (September) 1938, pp. 406-409.—In this article is recommended a proprietary coagulant from blood platelets (coagulen) for use in ocular operations. In extracting a cataract, whether by intracapsular or extracapsular method, a coagulant is useful to prevent the blood from the conjunctiva from flowing into the anterior chamber.

Hemorrhage from the iris may also be prevented, even after blood has extravasated into the anterior chamber from the iris. If this coagulant is used, the blood will coagulate rapidly. This coagulen can be removed by lavage of the anterior chamber or by extraction with forceps. After the coagulen has been removed, hemostasis remains complete.

In addition, this coagulant, in powdered form, may be used as a local applicant when operating on the eyelids or lacrymal sac. Further control of hemorrhage may be secured by injecting 20 c.c. of the coagulant into the subcutaneous tissue of the abdominal wall two hours before the operation.

December 10, 1938.

DESOTO COUNTY

Dr. and Mrs. Albert Vernon Richmond have returned to their newly completed home in Lake Cormorant after an extended honeymoon trip over the South.

Dr. Charles Whitley Emerson has returned to his home and practice at Hernando after a stay in the Baptist Memorial Hospital in Memphis.

Dr. and Mrs. William P. Warfield of Clarksdale are parents of a fine daughter, their first child, born recently at the Baptist Hospital, Memphis. Dr. Warfield was born and reared at Tunica, he practiced there until his removal to his present home some three or four years ago. Mrs. Warfield is from Knoxville, Tenn.

Mrs. W. T. Wilkins of Olive Branch, relict of the late and esteemed Dr. Wilkins and mother of Dr. LeRoy Wilkins of Clarksdale, had published recently in The Press-Scimitar a beautiful poem on "The Autumn Leaves."

A most fitting epitaph for a friend
"His life was gentle, and the elements
So mixed in him that Nature might stand up
And say to all the world,
'This was a man'."—Shakespeare.

The Issaquena-Sharkey-Warren Counties Medical Society will present their Christmas party and annual meeting Dec. 13. I know this will be an interesting gathering and I wish I could be there. Secretary Lippincott prepares a fine program, and you are made to feel at home.

The columnist and general, Hugh S. Johnston writes of a Bible given to him by his father and mother, urging him to its daily reading and to let it be the rule and guide of his faith and practice with all mankind. The note on the fly-leaf says:

> "Dear Hugh: Your mother and I sent you this Bible. We commend it to you as the very best thing we could give you. We believe that it is the word of God to man written by his inspired servants—that it contains the wisdom of the ages and all the rules and thinking that are needed for a decent life. We feel that you believe this and that you will wish your little son to know that this book is the best lamp and guide for his footsteps thruout life. Affectionately."

Let us then bear in the words of Dr. Lewellys F. Barker of Johns Hopkins, "In the management of patients and in the treatment of their diseases, it is our duty as physicians to see to it that we do not neglect to make application of any of the agents at our disposal that may reasonably be expected to help," and the crux of what we should use, he summed up in his climax, "Best results in clinical experience must ever remain the final and crucial test of every form of therapy."

A PHYSICIAN'S CREED

Whenever and wherever my work, by day or night, in peace or war, on land or sea, in laboratory or office, home or hospital, class room or open field, may I be patient, poised and thorough; loyal to science and to men, unselfish in labor and pure in life. May I hold that science is better than gold and men than greed, that service is proportionate to preparation, and reward to labor. May I use drugs only when indicated, diagnose before I treat or operate, clean before I deliver, use my laboratory, preserve a sense of proportion, respect but not worship my own opinion, seek consultation often, be slow to judgment and cautious in word and deed, and mingle in mind and touch with medical men. In the laboratory may I keep my records, in clinical cases my histories, and between them and me preserve the accuracy of truth. May I be strong with the weak, righteous with the wicked. wise with the foolish, honest with myself and kind to all men. May I avoid professional comparisons and sensitiveness, speak well of those of the household of medical faith, shun jealously and eschew envy, follow progress, beware lest the demands of life chill my enthusiasm for study and knowledge, play sometimes and wander when I may. May I take injustice gracefully, disappointment easily, fight disease cheerfully, death hopefully, believe victory and defeat equally a part of the larger plan, and rise from both fresh for repeated conflicts. May I remember that I am an heir to the same diseases as my patients, must meet the same death, pass with them beyond the River, and may I go with a smile.—Stewart Roberts, M.D., in Wisconsin Medical Journal.

Our local medical organization will convene Monday, Jan. 2, for election of officers and other important business. We earnestly desire a full attendance.

Rt. 4, Memphis, Tenn. L. L. Minor,
December 17, 1938 County Editor

LEFLORE COUNTY

Dr. F. M. Sandifer spent a few days fishing on the Alabama coast, Nov. 8-10.

Dr. W. E. Denman and R. B. Yates attended the meeting of the Clarksdale and Six Counties Medical Society, Wednesday, Nov. 9.

Dr. S. L. Brister, Sr., one of our leading physicians and best citizens died at his home here at 6 p. m. Nov. 10, after a long illness. Funeral services were held at three o'clock from the First Methodist Church, Nov. 11. Dr. Brister was 74, and had practiced in Greenwood since 1891. He was a native of Attala County. He is survived by his wife and three children, Dr. S. L. Brister, Jr., and Mrs. R. B. Wilburn and Mrs. R. H. Wilson.

Dr J. F. Lucas and his wife attended the meeting of the Southern Medical Association at Oklahoma City, Nov. 15 to 18. Dr. Lucas was secretary of the section on gynecology; and at this meeting, was made vice-president.

Dr. J. A. Crawford and wife and children of Philadelphia, spent the week-end, Nov. 12 and 13 here with relatives.

Dr. and Mrs. W. B. Dickins spent Wednesday, Nov. 16 at Stokes, Madison County, in Mrs. Dickins' home, where Miss Lucy Stokes still lives.

Dr. John Hodge Arrington, Jr., of Wichita Falls, Texas, visited relatives here Nov. 17.

Dr. L. B. Otken spent Thanksgiving week hunting in Issaquena County.

Dr. and Mrs. R. E. Wilson and children went to Oklahoma City Thanksgiving to visit relatives.

Dr. and Mrs. S. L. Brister, Jr., and daughter went out to Tuscaloosa, Ala., for a few days during Thanksgiving.

Dr. and Mrs. L. H. Hightower, Itta Bena, spent Thanksgiving with their daughter at Forest.

Dr. Jesse Hightower, Itta Bena, received his appointment, recently, as first lieutenant, Reserve Corps, U. S. A.

Greenwood, W. B. Dickins,
Dec. 1, 1938. County Editor

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION: Seventy-Second Annual Session and Thirty-Sixth Annual Session of the House of Delegates, Gulfport, May 9, 10, 11, 1939.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday, each month, Natchez, 7:30 p. m.

Amite County Medical Society: W. S. Stewart, Oskya, president; D. H. Thornhill, Crosby, secretary. Meets second Thursday, each month with Wilkinson County Medical Society, Field Memorial Hospital, Centreville.

Central Medical Society: J. T. Rainer, Yazoo City, president; Lawrence W. Long, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. D. House, Sledge, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: William P. Warfield, Clarksdale, president; N. C. Knight Clarksdale, secretary. Meets second Wednesday each month, Alcazar Hotel, Clarksdale, 12 noon.

Coast Counties Medical Society: F. O. Schmide, Ocean Springs, president; D. L. Hollis, Biloxi, secretary.

Delta Medical Society: C. W. Patterson, Rosedale, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

Desoto County Medical Society: J. M. Wright, Hernando, president; L. L. Minor, Rt. 4, Memphis, secretary. Meets first Monday of January, April, June, October, Hernando, 10 a. m.

East Mississippi Medical Society: C. H. Harrison, Philadelphia, president; Bob A. Cameron, Meridian, secretary.

Franklin County Medical Society: C. A. Everett, Bude, president; L. Costley, Meadville, secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: Walter E. Johnston, Vicksburg, president; Alston Callahan, Vicksburg, secretary. Meets second Tuesday each month, Mississippi State Charity Hospital, Vicksburg, 7 p. m.

Marshall County Medical Society: C. R. Senter, Byhalia, president, Herbert Phillips, Holly Springs, secretary. Meets second Thursday each month, alternating between Byhalia and Holly Springs.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary.

North Mississippi Medical Society: R. M. Adams, Ripley, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen-County Medical Society: Dr. R. J. Brown, Iuka, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September, December.

Pike County Medical Society: E. M. Givens, McComb, president; T. Paul Haney, Jr., McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Sunflower County Medical Society: U. S. Wasson, Moorhead, president; H. B. Cottrell, Indianola, secretary.

Tallahatchie County Medical Society: G. Lacy Biles, Sumner, president; G. D. Hightower, Webb, vice president; J. E. Powell, Charleston, secretary.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: (Copiah-Lawrence-Lincoln-Walthal), R. S. Savage, Brookhaven, president; R. B. Zeller, Hazlehurst, secretary. Meetings for 1930: Wesson, March 14th, 12:15 p. m.; Tylertown, June 13th, 12:15 p. m.; Monticello, Sept. 12th, 12:15 p. m.; Brookhaven, Dec. 12th, 12:15 p. m.

Webster County Medical Society: E. F. Arnold, Bellefontaine, president H. K. Curry, Eupora, secretary.

Wilkinson County Medical Society: C. E. Catchings, Woodville, president; E. M. Butler, Centreville, secretary. Meets second Thursday, each month, with Amite County Medical Society, Centreville.

Winona District Medical Society: T. J. Brown, Grenada, president; S. B. Caruthers, Grenada, secretary.

CENTRAL MEDICAL SOCIETY

The meeting of the Central Medical Society took the form of Post-graduate Medical Education Day, December 6, with morning, afternoon and evening sessions at the Robert E. Lee Hotel, Jackson, presented by members of the faculty of Baylor University College of Medicine, Dallas, Texas. A cordial invitation was extended to all physicians of Mississippi and many attended. The program:

Morning Session

10:00 "New Developments in Treatment of Cancer with Radiation."—C. L. Martin, Professor of Radiology.

10:30 "Prevention in Pediatrics."—John G. Young, Assistant Professor of Clinical Pediatrics.

11:00 "Use of Sulfanilimide in General Medicine."—W. G. Reddick, Professor of Clinical Medicine.

11:30 "Osteomyelitis."—W. B. Carrell, Professor of Orthopedic Surgery.

Noon

12:00-1:45

Round-Table Discussions and Luncheons

Obstetrics and Urology

(Room E—3rd Floor)

1. "Pyelitis in Pregnancy."—A. I. Folsom, Professor of Urology.

2. "Diagnosis and Management of Posterior Occipital Position"—C. R. Hannah, Professor of Obstetrics.

Medicine and Pediatrics

(Roof Garden)

1. "Coronary Occlusion"—H. M. Winans, Professor of Medicine.

2. "Pediatric Diagnosis and Stovarsol Treatment of Syphilis"—John G. Young, Assistant Professor of Clinical Pediatrics.

Surgery and Orthopedics

(Room F—3rd Floor)

1. "Fractures Involving the Ankle Joint"—W. B. Carrell, Professor of Orthopedic Surgery.

2. "Surgical Treatment of Acute Cholecystitis"—J. V. Goode, Assistant Professor of Clinical Surgery.

Radiology and Dermatology

(Japanese Room—Section A)

1. "Discussion of the Eczema Problem, Causes and Treatment"—Bedford Shelmire, Professor of Dermatology and Syphilology.

2. "X-Ray Studies of Liver and Spleen"—C. L. Martin, Professor of Radiology.

Ophthalmology and Otolaryngology

(Japanese Room—Section B)

1. "The Significance of Visual Fields"—E. H. Cary, Professor of Ophthalmology and Otolaryngology.

—Afternoon Session—

1:45 "Specific Treatment of Pneumonia"—W. G. Reddick, Professor of Clinical Medicine.

2:15 "The Handling of the Common Skin Diseases in Private Practice"—Bedford Shelmire, Professor of Dermatology and Syphilology.

2:45 "Pyelitis in Children"—A. I. Folsom, Professor of Urology.

3:15 "Appendicitis"—J. V. Goode, Assistant Professor of Ophthalmology and Otolaryngology.

4:15 "A Study of Fallopian Tubes in Sterility" —C. L. Martin, Professor of Radiology.

—Banquet—

Convention Hall

6:15 p. m. O'clock

—Evening Session—

8:00 "Treatment of Hypertension"—H. M. Winans, Professor of Medicine.

8:50 "Responsibilities of the Attending Physician During the Period of Pregnancy" —C. R. Hannah, Professor of Obstetrics.

COAST COUNTIES MEDICAL SOCIETY

At the December meeting of the Coast Counties Medical Society, the following officers were elected:

President, Dr. F. O. Schmidt, Ocean Springs.

Vice-president, Dr. A. C. Hewes, Gulfport.

Secretary, Dr. D. L. Hollis, Biloxi.

Delegates to State Medical Association, Dr. W. W. Lake, Pass Christian.

Medical Defense, Dr. D. G. Rafferty, Pass Christian.

Dr. Charles Le Baron of Gulfport died on the eleventh of December after a short illness of a few short days. Dr. Le Baron was buried in Mobile and a large number of doctors on the Coast attended the funeral. Dr. Le Baron had practiced in Gulfport for nearly thirty years. The medical profession has lost a valuable and respected member. The community has lost a very valuable citizen. He was very active in medical circles and just recently served as president of the Gulf Coast Clinical Society.

Drs. B. Z. Welch and D. L. Hollis attended the program given by Baylor University in Jackson, which was a very enlightening one

Our society is a very active one and is making plans for giving the State Medical Association, when it meets in Gulfport, one of the best entertainments it has ever had.

Biloxi, D. L. Hollis,
December 16, 1938. Secretary.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

The annual meeting and Christmas party of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Vicksburg Hotel, Vicksburg, Tuesday, December 13, beginning with open house at 5 p. m. Banquet was served at 7 p. m. Seventy-five members and guests were present. Dr. B. B. Martin, Jr., president, presided.

Dr. Camille Estornelle, Vicksburg, gave the invocation. The speakers included Dr. Joe E. Green, president, Dr. J. P. Wall, president-elect, and Dr. J. W. D. Dicks, representing the past presidents of the Mississippi State Medical Association, and Dr. Maxwell E. Lapham, New Orleans, La.

Dr. F. Michael Smith presented the representatives of the Woman's Auxiliary and Mrs. Leon S. Lippincott gave the response.

The scientific program:

Peptic Ulcer.—Dr. Edward William Alton Ochsner, professor of surgery, Tulane University of Louisiana School of Medicine.

Recent Advances of Obstetrical and Anesthesia and Analgesia.—Dr. Edward Lacy King, professor of obstetrics, Tulane University, School of Medicine.

The weekly educational program to be presented by the society during the first quarter of 1939 was adopted as follows:

January 4th—"A Touch of Indigestion"—Dr. M. J. Few.

January 11th—"Growing Pains"—Dr. H. B. Goodman.

January 18th—"Impetigo or 'Indian Fire'" —Dr. James L. Hall.

January 25th—"Whooping Cough—Care of the Case and Protection for the Public"—Dr. Preston Herring.

February 1st—"Doctor" and "Doctors"—Dr. Sidney W. Johnston.

February 8th — "Poliomyelitis — Infantile Paralysis"—Dr. Guy C. Jarrett.

February 15th—"Cataract in the Old"—Dr. Hugh H. Johnston.

February 22nd—"Injury to the Knee Joint" —Dr. Walter E. Johnston.

March 1st—"Mission of a Charity Hospital" —Dr. Edley H. Jones.

March 8th—"Obstetrics With or Without Trained Helpers"—Dr. I. C. Knox.

March 15th—"Facts and Fads Concerning Weight Reduction"—Dr. Nathan B. Lewis.

March 22nd—"Why Should the General Physical Examination of Those Above Forty Require a Laboratory Report?"—Dr. Leon S. Lippincott.

March 29th—"The Low Down on the High Costs of Medical Care"—Dr. B. B. Martin, Sr.

Officers of the Society for the year of 1939 were elected as follows:

President—Dr. Walter E. Johnston, Vicksburg.

Vice-presidents: From Issaquena County, Dr. W. H. Scudder, Mayersville.

From Sharkey County, Dr. Henry B. Goodman, Anguilla.

From Warren County, Dr. W. K. Purks, Vicksburg.

Secretary-Treasurer—Dr. Alston Callahan, Vicksburg.

Delegates to the Mississippi State Medical Association: From Issaquena County, Dr. W. H. Scudder, Mayersville; from Sharkey County, Dr. W. C. Pool, Cary; from Warren County, Dr. J. A. K. Birchett, Jr., Vicksburg.

Member of Committee on Medical Defense—Dr. F. Michael Smith, Vicksburg.

Member of Board of Censors for Three Years—Dr. W. C. Pool, Cary.

Councilor for Woman's Auxiliary—Dr. Sidney W. Johnston, Vicksburg.

Committee on Radio Program: Drs. F. Michael Smith, B. B. Martin, Jr., and Alston Callahan, all of Vicksburg.

Resolutions of respect on the death of Dr. H. H. Haralson were presented by Dr. F. Michael Smith and were unanimously adopted.

The next meeting of the society will be held at the Mississippi State Charity Hospital, Vicksburg, Tuesday, January 10, at 7 p. m.

The report of the out-patient clinic conducted by the society at the Mississippi State Charity Hospital, Vicksburg, for the month of November showed a total of patient visits of 1552, divided by services as follows: Medical, 150; surgical, 155; obstetrical, 45; gynecological, 98; eye, ear, nose and throat, 93; orthopedic, 10; pediatric, 20; genito-urinary, 795; admitted to hospital, 186. Patients came from 17 counties of the state and three patients were from outside the state.

DR. JOHN ALEXANDER KLEIN BIRCHETT

Whereas, on July 22nd death claimed John A. K. Birchett, a man of vision and ability, a physician of eminence and distinction whose life and services for the past forty-seven years had been given to the sick and needy of our city and community, whose every thought and act were for the betterment of his profession and for the help and aid to those in distress; a founder of this society and one of its most beloved members, one of its past presidents and for many years its able secretary, and,

Whereas, by his death the medical profession has suffered an irreparable loss, this society has lost one of its most beloved members and our city and county one of its most loyal citizens, therefore,

Be it resolved, that we, the members of the Issaquena-Sharkey-Warren Counties Medical Society, extend to his family our deepest sympathy in the loss of a true husband, a devoted father and grandfather, and a loving brother, that a copy of these resolutions be sent to his family and a copy be spread on the minutes of this society.

(Signed): Sidney W. Johnston,
F. Michael Smith,
For the society.

Adopted October 11, 1938.

RESOLUTIONS OF RESPECT

Whereas, "Death to a good man is but passing through a dark entry, out of one little dusky room of his Father's house, into another that is fair and large, lightsome and glorious, and divinely entertaining,"

Whereas, the Omnipotent Father, the Builder and Keeper of the House Eternal, did on November 18th, 1938, lead our venerable friend and brother physician, Dr. Hugh Hardin Haralson from the dim-lighted room of his earthly house, where he had lived and served for eighty-four years, eight months and eight days, through the dark entry to the "prepared place" for him in the House Eternal,

Whereas, this faithful husband, devoted father, beloved grandfather, staunch friend, interesting companion, and excellent physician has spent many years with us enriching our lives through service and devotion,

Whereas, this respected and learned physician, honored and revered by his profession, faithful to the tenets and ethics of his vocation, trusted and sanctioned repeatedly by his co-workers in selecting him as a member of the State Board of Health and electing him as president of local society and the State Medical Association,

Whereas, he was a member of the Issaquena-Sharkey-Warren Counties Medical Society at the time of his departure, and the recollection of his former regular attendance, the wisdom of his councils, his worthy contributions in fellowship and scientific discussions abide with us,

Therefore, be it resolved, that this society in humble recognition of the Great Physician's care for all mankind and His having ordained "Death as the liberator of him whom freedom cannot release, the physician of him whom medicine cannot cure, the comforter of him whom time cannot console" bow our heads and hearts in unquestioning submission to the final homeward journey of our beloved friend, co-worker, and member of our society, Dr. Hugh Hardin Haralson, and

Be it further resolved, that we spread on the minutes of the Issaquena-Sharkey-Warren Counties Medical Society a copy of these resolutions and send a copy to the family and one to the press in token of our sincere appreciation, high esteem, and abiding sympathy.

H. B. Wilson
F. Michael Smith
I. C. Knox,

Committee on Resolutions.

Adopted December 13, 1938.

TRI-COUNTY MEDICAL SOCIETY

The annual meeting of the Tri-County Medical Society was held at Brookhaven, Dec. 13, 1938. The program was:

Neuro-Psychiatry in General Practice.—R. B. Zeller, Hazlehurst, president.

State Medicine—J. P. Wall, Jackson, president-elect, Mississippi State Medical Association.

Management of Burns and Defects Arising From Burns.—Neal Owens, New Orleans.

Office Gynecology.—J. T. Sanders, New Orleans.

Officers elected for 1939 were:

President, R. S. Savage, Brookhaven.

Secretary, R. B. Zeller, Hazlehurst.

Vice-presidents, Miller Henry, Georgetown; J. W. Wilson, Monticella; J. R. Markette, Brookhaven; J. J. Pittman, Tylertown.

Delegates: J. C. McGuire, Hazlehurst; D. T. Langston, New Hebron; R. C. Massengill, Brookhaven; A. B. Harvey, Tylertown.

Censors: B. S. Waller, Silver Creek; C. L. Simmons, Hazlehurst; R. C. Massengill, Brookhaven, B. L. Crawford, Tylertown.

Chairman, Medico-Legal Defense: O. N. Arrington, Brookhaven.

Hazlehurst, R. B. Zeller,
December 10, 1938. Secretary.

HOSPITAL STAFF TRANSACTIONS

MISSISSIPPI STATE HOSPITAL ASSOCIATION, Tenth Annual Session, Gulfport, May 8, 1939.

Aberdeen Hospital: Third Monday, each month, 7:00 p. m.

Anderson Infirmary: First Friday, each month, 6:30 p. m.

Biloxi Hospital: First Thursday, each month, 7:30 p. m.

Bramlett Hospital: Third Wednesday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 12:00 noon.

Field Memorial Hospital: Second Thursday, each month, 6:30 p. m.

Gilmore Sanitarium: Third Thursday, each month, 8:00 p. m.

Greenwood-Leflore Hospital: First Thursday, each month 6:30 p. m.

Grenada Hospital: Second Tuesday, each month, 6:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month. 7:30 p. m.

Holmes County Community Hospital: Second Thursday, each month, 7:00 p. m.

Houston Hospital: Last Thursday, each month, 7:30 p. m.

Ivy Hospital: First Monday, each month, at 7:00 p. m.

Jackson County Hospital: Second Thursday, each month, except July and August, 7:00 p.m.

Jackson Infirmary: Last Tuesday, each month, except three summer months, 7:00 p.m.

King's Daughters Hospital, Brookhaven: First Tuesday, each month, 7:00 p. m.

King's Daughters Hospital, Greenville: First Wednesday, each month, 7:00 p. m.

King's Daughters Hospital, Gulfport: Third Thursday, each month, 8:00 p. m.

King's Daughters Hospital, Yazoo City: First Monday, each month, 7:30 p. m.

Macon Hospital: First Tuesday, each month, 7:30 p. m.

Magee General Hospital: Twenty-fifth each month, 7:30 p. m.

Mayes Hospital: First Monday, each month, 2:30 p. m.

McComb City Hospital: First Tuesday, each month, 6:00 p. m.

McComb Infirmary: Second Thursday, each month, 7:00 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Mississippi State Hospital, Vicksburg: Third Tuesday, each month, 7:00 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

New Albany Hospital and Clinic: Second Tuesday, each month, 8:00 p. m.

Newton Hospital: Second Thursday, each month.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Oktibbeha Hospital: Last Thursday, each month, 7:30 p. m.

Oxford Hospital: Last Monday, each month.

Pontotoc Clinic: First Tuesday, each month, 7:30 p. m.

Rush's Infirmary: First Friday, each month, 7:30 p. m.

Scott County Hospital: Third Wednesday, each month.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

Tylertown Hospital: Second Thursday, each month, 7:00 p. m.

U. S. Veteran's Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:30 p. m.

GREENWOOD LEFLORE HOSPITAL

There were sixteen present at the regular staff meeting of the Greenwood Leflore Hospital, Thursday, Nov. 3. Dr. J. P. Bates presided. After enjoying a nice supper and attending to regular business, the following reports of deaths were discussed: Dr. W. E. Denman reported a case of cardio-renal disease, with failing compensation, a man, age 64; Dr. R. B. Yates, a case of streptococcic septicemia of 38 hours duration, in a child of 6, following an injury to upper part of femur, from a fall on concrete pavement; Dr. J. F. Bates, a case of influenzal meningitis; Dr. L. F. Ferguson, a case of acute exacerbation of chronic nephritis, with uremia. An illustrated film showing a sub-total gastrectomy ended the program.

Greenwood, W. B. Dickins,
December 1, 1938.

IVY HOSPITAL STAFF MEETING

A regular meeting of the staff of the Ivy Hospital was held at 5 p. m., December 8, postponed from the regular date. All members were in attendance with the exception of Dr. J. E. Ellis, who was in Jackson attending a public health meeting.

A paper with the title, "Pyuria," was presented by Dr. George A. Campbelle.

Program was arranged for the next monthly meeting with a paper on "Oral Medical Conditions" to be delivered by Dr. R. P. Abbott; also a paper by Dr. F. A. Stewart on "Relation of the Ministry to the Medical Profession."

West Point, George A. Campbelle,
December 9, 1938. Secretary.

VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Monday, December 12, and after a supper served at 6:30 p. m., was called to order by the president, Dr. Leon S. Lippincott, with eleven members and two guests present. The program included:

Reports from the Records Department and Analysis of the Work of the Hospital.

Report of Vital Statistics.—Dr. F. Michael Smith, Director, Warren County Health Department. Read by Dr. Leon S. Lippincott.

Special Case Reports—

1. Duodenal Ulcer With Obstruction.—Dr. J. A. K. Birchett, Jr.

2. Tularemia — Case Report. — Dr. L. J. Clark.

Discussed by Drs. G. C. Jarratt, A. Street, L. S. Lippincott, J. A. K. Birchett, Jr., and George M. Street.

3. Carcinoma of Adrenal Gland.—Dr. G. C. Jarratt.

Discussed by Drs. A. Street, George Street, G. W. Gaines, L. S. Lippincott.

Cancer Clinic For Discussion—

1. Adeno-carcinoma of prostate and bladder (grade IV)—Dr. A. Street.

2. Squamous cell carcinoma of skin of chin (grade II).—Dr. A. Street.

3. Squamous cell carcinoma of cervix uteri (grade IV) (Wassermann test 4-plus).—Dr. A. Street.

4. Adeno-carcinoma of rectum (grade III). Dr. A. Street.

5. Hemangio-endothelioma of female urethra.—Dr. A. Street.

6. Adeno-carcinoma of breast (grade IV).—Dr. J. A. K. Birchett, Jr.

Demonstration of Selected Roentgen Ray Studies.—Compound fracture of tibia and fibula; myostitis ossificans; thorax for discussion (3 cases); duodenal ulcer; stomach for discussion.

Officers for year of 1939 were elected as follows:

President—Dr. R. A. Street, Jr.
Vice-President—Dr. L. J. Clark.
Secretary-Treasurer.—Dr. L. S. Lippincott.

The next meeting of the staff will be held Tuesday, January 10, 1939.

ABSTRACT: DUODENAL ULCER WITH OBSTRUCTION

J. A. K. Birchett, Jr., M.D.

Patient.—Colored, female, age, 34; occupation, cook.

Present Complaint.—For the past six months has felt severe pain in the epigastric region two or three hours after eating. The pain was somewhat relieved after it first began by the taking of food, but for the last two months eating has not afforded relief. At times there is severe pain in the region of the left shoulder blade. Has lost twenty pounds of weight in six months. Appetite is fair, bowels are normal. Has not noted any change in the appearance of the stools. Has not had any fever.

Past History.—Not remarkable, except for attacks of indigestion for several years. No pregnancies, no surgical operations. No cardiovascular, respiratory, or genito-urinary symptoms. Menstruates three to five days, no pain. No vaginal leucorrhea.

Physical Examination.—Well developed, fairly well-nourished negro female not acutely ill. Temperature 98°F., pulse 84, respiration 18. Nose and throat essentially negative. Dental caries of moderate degree. Tongue coated. Thyroid negative. Heart normal. Blood pressure 110/60. Lungs: no areas of dullness, no rales. Abdomen: slight tenderness over the epigastric area, pain on deep pressure with slight rigidity. No masses palpable. Pelvic examination not remarkable. Skin normal. Reflexes normal.

Clinical Laboratory.—Urine essentially negative. Blood count: hemoglobin, 82%; red cells, 5,060,000; total white count, 7,000; 68% polymorphs. Wassermann negative.

Procedure.—From the history and physical findings, we felt sure that we were dealing with a rather typical case of peptic ulcer. For this reason, the patient was hospitalized and subjected to thorough gallbladder study and x-ray of the stomach and duodenum. Gallbladder with dye showed no filling and the gastric series and fluoroscopy presented a deformity of the duodenal cap commensurate with ulcer, with evidence of obstruction.

After the diagnosis was definitely arrived at, patient was given the preoperative course of treatment for this type of lesion, that is, lavage of the stomach daily and administration of glucose and calcium intravenously to build up the reserve. One week after admission, patient was subjected to surgery and, under cyclopropane anaesthesia, an upper rectus incision was made. The liver was in good condition. Gallbladder was normal in color and thin-walled; contained no stones. There was a definite induration in the duodenum and the pylorus, and on the superior border there was characteristic stellate area with evidence of contraction and scarring of ulcer. There was almost a complete obstruction of the pylorus because of this deformity. A posterior gastro-enterostomy was done, the patient suffered little shock from this procedure.

Postoperative.—Course was rather uneventful. The duodenal tube was kept in the stomach for one week with almost constant lavage to prevent distension and, following surgery, glucose was administered at daily intervals. The patient was able to tolerate selected nourishment after the end of seven days and was strong enough to be up and about on the fourteenth postoperative day and was discharged from the hospital on the twenty-first postoperative day.

Subsequent.—Since the patient's discharge, she has presented herself to the out-patient department for observation and, at this time, she is symptom-free with good appetite and digestive function. At this time an x-ray was taken to see the functioning of the gastroenterostomy. This was found to be satisfactory.

ABSTRACT: TULAREMIA

L. J. Clark, M.D.

Patient.—White male, age 57. First seen on October 11, 1938.

Chief Complaint.—Fever, malaise, irregular rigors, loss of weight, night sweats. This had been existing for two weeks. Previous to this time, had been in perfect health; had never had any serious illnesses in the past. There had been no history of any exposure to tuberculosis or any other contagious diseases. He stated that the only thing that he could possibly know of about his past history was that about two weeks previous to the onset of his illness, while strolling through the woods, he noticed a tick on his left ankle. This was removed, but the ankle continued sore and was still painful and ulcerated. There had been no history of any cold whatsoever. There had been some irregular headaches. He stated that about six months ago he was operated upon for an intestinal obstruction in a hospital near his town, the cause of which was never satisfactorily explained to him. However, he made an uneventful recovery. There had been no history of any venereal disease.

Physical Examination.—Slightly emaciated. Color deep dark yellow. Tongue coated and dry. Temperature 100°F, blood pressure 110/80. Neck was negative for abnormal masses or pulsations. Thorax was normal. Abdomen revealed no masses or areas of tenderness. The left inguinal region revealed several enlarged tender glands, and the skin was somewhat reddened over these glands. Examination of the extremities revealed a small irregular punched-out ulcer on the left heel, lateral aspect.

Complete blood study at this time revealed an erythrocyte count of four million, hemoglobin 87%, leukocytes 12,700. Urinalysis was normal. Wassermann and Kline and Young tests were negative. The blood for tularemia was negative in all dilutions.

Procedure.—He was put on tonic treatment and advised of the possibility of tularemia following tick bite. He was also given prontylin, six tablets per day, and reported every three or four days for observation. October 17, his fever had disappeared. However, he was still feeling bad and weak. The blood examination was repeated October 26 and found to be positive for tularemia in dilution of 1-1000. At this time, the agglutination was 4-plus. It was necessary about the fourth of November to incise the gland in the inguinal region, which drained pus for several days and completely healed. He has returned home and is perfectly well at the present time.

Discussion.—This case was rather interesting from two view-points. First, tularemia from a tick bite is not so common, but is a fact that should be borne in mind constantly. It is true that in this case the history was classical and strongly suggestive from the very onset, but it is possible in other cases to fail to elicit history of any kind of an insect bite. We frequently have in mind the question of the rabbit being the only method of transferring this disease. There have been other methods also reported. The second reason for reporting this case is possibly the spectacular disappearance of the fever after administration of sulfanilamide. Whether this agent had any effect whatsoever on the tularemia is rather hard to say, but it would be well worth repeating in the event of any further cases of tularemia.

WOMAN'S AUXILIARY

TO THE MISSISSIPPI STATE MEDICAL ASS'N

President	Mrs. John B. Howell Canton
President-elect	Mrs. Hugh Johnston, Jr. Vicksburg
1st Vice President	Mrs. C. C. Hightower Hattiesburg
2nd Vice President	Mrs. Henry Boswell Sanatorium
3rd Vice President	Mrs. F. L. Van Alstine Jackson
4th Vice President	Mrs. Temple Ainsworth Jackson
Recording Secretary	Mrs. H. C. Ricks Jackson
Treasurer	Mrs. J. D. Simmons Cleveland
Parliamentarian	Mrs. F. E. Rehfeldt Jackson

Councilors: 1st district, Mrs. T. G. Hughes, Clarksdale; 2nd district, Mrs. C. M. Roberts, New Albany; 3rd district, Mrs. W. L. Orr, Fulton; 4th district, to be appointed; 5th district, Mrs. L. H. Clark, Vicksburg; 6th district, to be appointed; 7th district, Mrs. L. L. Polk, Purvis; 8th district, Mrs. W. K. Stowers, Natchez; 9th district, Mrs. D. J. Williams, Gulfport.

BENEFACTOR ESTABLISHES FUND FOR PREVENTORIUM

We take the greatest pleasure in announcing to the members of the Auxiliary that the Trust Fund for the Preventorium has been handsomely provided for by a man who is greatly interested in the work being done there for the rehabilitation of the children of our state.

He has arranged a generous amount permanently to take care of the needs of the children for which our Preventorium Fund is intended, that they may get the most from their stay in the Preventorium.

The Preventorium management is very grateful to the Auxiliary for its untiring effort to keep this fund going and for the enthusiastic support of its members, but we are very glad also that the burden has been lifted in such a generous way.

This gentleman asks that his name be withheld, but we want him to know that we are deeply grateful for his understanding of the needs of these children and his generosity in permanently caring for those needs.

Mrs. Henry Boswell,
Chairman of Preventorium

CHRISTMAS LUNCHEON

The Woman's Auxiliary to the Central Medical Society held its December meeting as a Christmas luncheon at the Edwards Hotel in Jackson.

Hostesses for the occasion were the wives of the doctors of the State Board of Health and included Mrs. Felix J. Underwood, Mrs. George Riley, Mrs. H. B. Cottrell, Mrs. A. L. Gray and Mrs. H. C. Ricks.

Mrs. Paul Ramsey of Millsaps College and Mrs. Julia McCoy, accompanied by Mrs. George Owen, gave several delightful numbers of music.

The table was lovely with its large centerpiece of blue and silver and with blue candles in silver holders and green ivy extending the length of the tables.

Enjoying the luncheon and fellowship of the holiday season with the fifty-five members present were the following members of the Issaquena-Sharkey-Warren Auxiliary who were honor guests for the occasion: Mrs. L. J. Clark, Mrs. F. M. Smith, Mrs. M. H. Bell, Mrs. B. B. Martin, Jr., Mrs. Hugh Johnston, Mrs. Jack Birchett, Jr., of Vicksburg, and Mrs. W. C. Pool of Cary.

An unexpected pleasure was the presence of Mrs. C. L. Martin, Jr., of Dallas, Texas, who had accompanied Mr. Martin to Jackson for the Central Medical Society program given by the medical faculty of Baylor University.

CENTRAL MEDICAL SOCIETY

The monthly meeting of the Woman's Auxiliary to the Central Medical Society was held on Tuesday, January 3rd, in the home of Mrs. B. J. Marshall at Whitfield. Hostesses for the occasion were the wives of the Whitfield staff which include: Mrs. B. J. Marshall, Mrs. F. A. Donaldson, Mrs. W. M. Harpole, Mrs. L. W. Willey, Mrs. C. H. Denser, Mrs. Robert Price and Mrs. V. D. Thomas.

Mrs. Noel Womack of Jackson, presided. The meeting was high-lighted by an announcement from Mrs. Henry Boswell that the Preventorium Trust Fund had been taken care of by a man who preferred to remain anonymous. The auxiliary had been planning a campaign to raise the needed $5,000, but this generous contribution will enable them to direct their efforts in other ways.

Members present were: Mrs. Walton Lipscomb, Mrs. Tate Carl, Mrs. A. L. Gray, Mrs. H. B. Cottrell, Mrs. George W. Owen, Mrs. O. A. Schmid, Mrs. Lee Lipscomb, Mrs. I. C. Huggins, Mrs. H. C. Ricks, Mrs. Noel C. Womack, Mrs. F. L. Van Alstine, Mrs. F. E. Rehfeldt, Mrs. S. H. McLean, Mrs. H. F. McGee, Mrs. T. W. Kemmerer, all of Jackson; Mrs. John B. Howell, of Canton; Mrs. John Harter, Mrs. Henry Boswell, of Sanatorium; Dr. Estelle Magiers, of Whitfield.

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The ladies of the Four-County Medical Auxiliary entertained the members of the Thirteen-County Medical Auxiliary with a beautifully-planned luncheon at the Jeff Davis Hotel December 12. Mrs. Robert Christian, the president, presided. Holiday decorations lent festive charm to the setting. A musical program including several distinguished vocal and instrumental numbers preceded the highlight of the occasion—a message from Mrs. H. King Wade of Hot Springs, Ark. Into greetings expressing the joy of the season, she wove a thought-provoking Christmas message. Her gracious manner and talent as a speaker won the admiration of all present.

A tea honoring Mrs. Wade was given that afternoon at the Highland Circle home of Mrs. Woodson.

* * *

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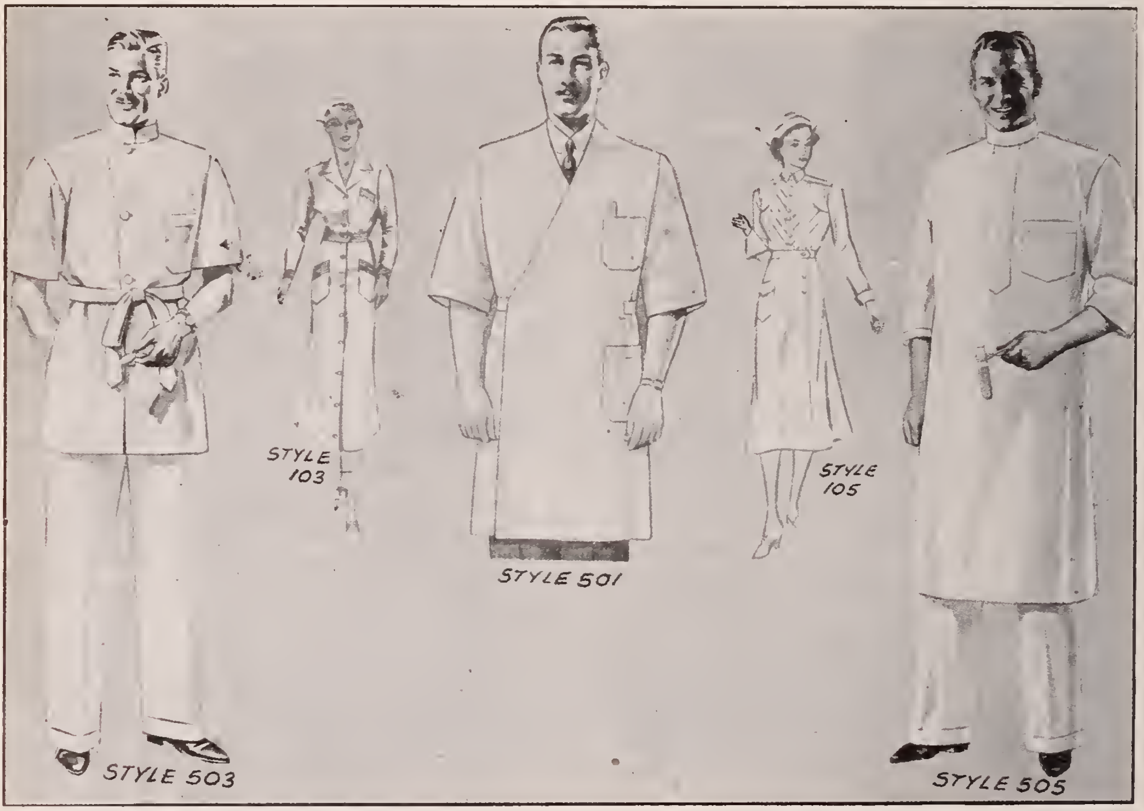

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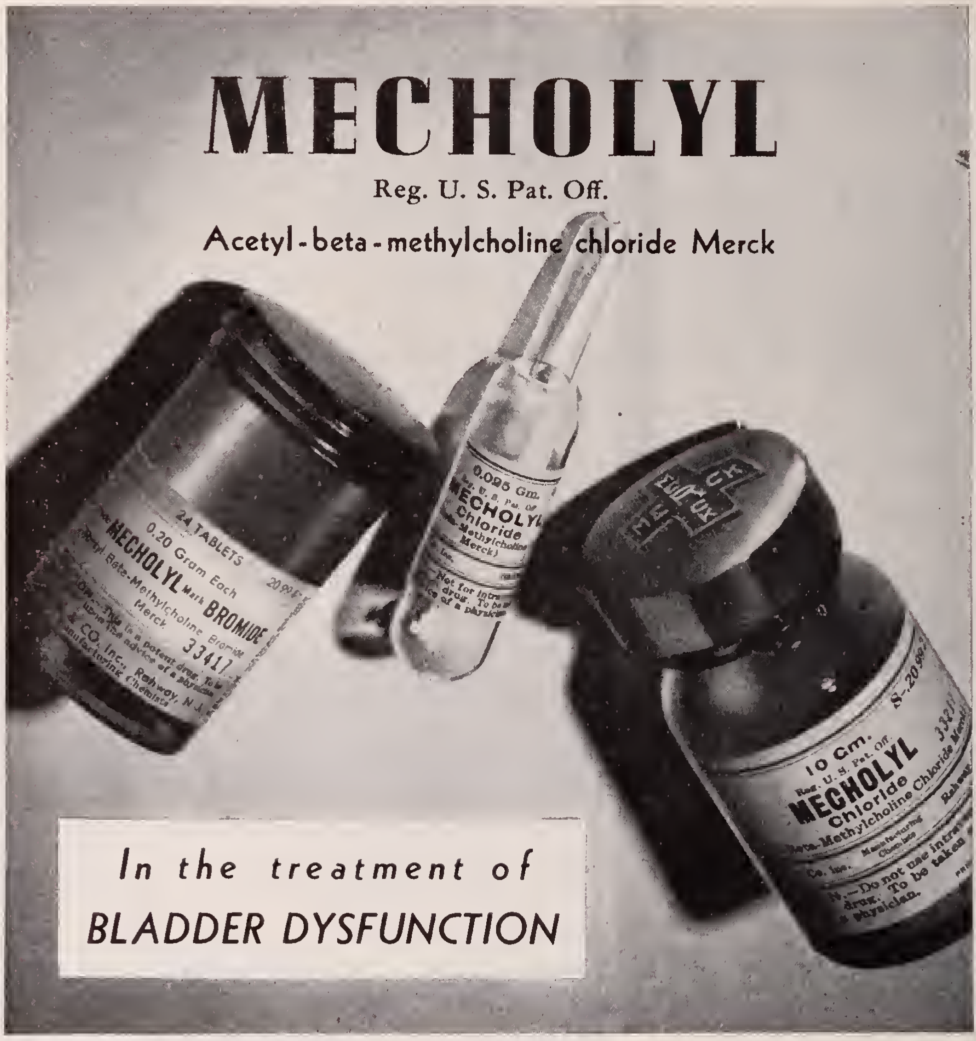
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Classification and Treatment of Nephritis*

LYLE MOTLEY, M.D., F.A.C.P.
Associate Professor of Medicine, School of Medicine, University of Tennessee
MEMPHIS, TENN.

ANY INFECTIOUS or inflammatory process which attacks tissues in other parts of the body also involves the kidneys at times. However, this discussion will be confined to the group of non-suppurative inflammatory and degenerative changes which involve the kidneys and which are generally termed "nephritis." Nephritis may be defined as a diffuse, inflammatory, degenerative, or proliferative lesion involving the renal parenchyma, the interstitial tissue, or the renal-vascular system. Considering all the aspects of the disease, it becomes increasingly apparent that we are not dealing with primary disease of the kidneys, but only kidney involvement as a part of a generalized process. Christian has stated that we should as soon think of typhoid as an enteritis as to consider Bright's disease as a nephritis. In common with several writers on the subject, I think we had better simplify the situation to begin with by calling the disease "Bright's disease"—not Bright's kidney disease—in recognition of the man who first described the association of albuminuria, kidney lesions, edema and hypertension. This is all the more true since our knowledge of the etiology of nephritis is very unsatisfactory and no actual knowledge has been added since Bright's original description.

Nephritis is often misdiagnosed. The condition can exist in some forms in the absence of any urinary findings, and urinary changes which are ordinarily considered to be indicative of Bright's disease are not infrequently present when no actual nephritis exists. An important point in the consideration of the subject is the question of albuminuria. While certain types of nephritis are characterized by various degrees of albuminuria, the finding of large or small quantities of albumin in the urine is not alone diagnostic of nephritis, since it occurs frequently with perfectly normal kidneys. After strenuous physical exercise, or even intense mental application, heavy traces of albumin may appear in the urine, cold baths may cause it, and the medical director of a life insurance company states that the Sunday automobile excursions are commonly productive of albuminuria on Monday. Chronic passive congestion from any cause can cause marked albuminuria. However, in Bright's disease the question of albuminuria must be given due consideration, since it frequently causes important physiological disturbances. As much as one-tenth to one-fifth of the total protein of the plasma may be lost each day in a severe case of nephritis. This, of course, has very important implications regarding the patient's general physical condition. Even when albuminuria is a part of actual Bright's disease, the degree of albuminuria is not an indication of impairment of renal function, but is only a sign of the type of Bright's disease which is present. In any acute febrile disease, such as pneumonia, acute appendicitis, etc., there very frequently appears albumin in the urine as the result of toxic irritation of the kidneys. This is a perfectly harmless manifestation and does not indicate the existence of an actual nephritis. The same holds true, though to a lesser extent, regarding the presence of microscopic blood and casts in the urine. Even unexplained epidemics of albuminuria have occurred, one such being reported from West Point, where large quantities of albumin appeared in many of the cadets without any other evidences of nephritis and without any indications of nephritis ever developing.

There are many classifications of nephritis, based on the different viewpoints of writers who offer such classifications. Too much attention has been paid to the kidney itself, and unfortunately many writers lose sight of the fact that the kidney is not primarily the seat of disease, but the kidney changes are a part of other conditions. This has resulted in confusing classifications, some of them very ponderous, and instead of simplifying the situation, such classifications have only further confused the issue.

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*Read before the Fifth District Medical Society, Camden, Ark., October 5, 1938.

Classifications give a false sense of security in fostering the idea of completely acquired knowledge. If there is any field of medicine where knowledge is incomplete, it is in the group of Bright's diseases. For this reason, the simpler a classification can be, the better basis we have on which to work toward the acquirement of knowledge. It seems necessary to have a classification of almost anything as a starting point from which to work, and a careful consideration of the pathologic changes, pathological physiology, and the clinical manifestations of Bright's diseases would at present justify classifying them into groups, inflammatory and degenerative. Within these groups fall three types: (1) glomerular nephritis, (2) tubular nephritis, (3) arterial nephritis. These three types of nephritis can be subdivided, but there is no point in complicating the matter further, and most of the subdivisions are different stages of the same type of nephritis.

ACUTE GLOMERULAR NEPHRITIS is an inflammatory lesion of the structural unit of the kidney or glomerulus. The inflammatory process in the small blood vessels is not confined to those of the kidney alone, but involves the capillaries and arterioles of every tissue in the body. The disease really represents a generalized disease of the capillaries —a capillitis—in which the lesions of the glomerular capillaries are the most prominent manifestations. Because of the marked evidence of the disease which appears in the urine, attention has been focused too closely on the kidneys instead of considering the kidneys only part of the generalized disease. The etiology is not known exactly, but most authorities consider it a streptococcus disease. This is strongly suggested by the frequent occurrence of acute Bright's disease in connection with tonsillitis, sinusitis and other streptococcic infections. However, it often occurs primarily without any demonstrable acute focal infection. This disease is characterized by generalized edema, frequently most marked in the face, increased blood pressure, fever, albumin of greater or less degree in the urine, red blood cells present, even though they might be microscopic in quantity, diminished urine output, high specific gravity, increased blood nitrogen, and, in severe cases, retinitis. The diagnosis is not based on any one finding alone, but the group of findings as mentioned. The treatment is rest in bed, primarily. During the first few days, if edema is a troublesome feature, fluid should be limited to 1000 to 1500 c.c. and there should be reasonable salt restriction. If edema is not a prominent or troublesome feature, no special limitations of fluids need be carried out. During the first three to seven days, the diet should be principally carbohydrates with a low protein intake, and gradually increased to a normal diet at the end of about two weeks. As soon as conditions permit, a thorough search for focal infections and removal of any suspicious infections should be carried out. The prognosis for life is excellent, death during the acute stages being very rare.

A serious aspect of acute Bright's disease is the possibility of it passing into another stage, or so-called **subacute glomerular nephritis**, which itself is a continuation of the acute stage and is sometimes referred to as extracapillary glomerular nephritis. The pathology of this stage is a low-grade progressive inflammatory change in the glomerulus and capsule, filling the intracapsular space and producing pressure on the glomerular tuft, with ultimate pressure necrosis, destruction and fibrous replacement. When this progressive condition has destroyed a large enough number of glomeruli, kidney function is badly impaired and death very often takes place in a relatively short period of time. This stage is characterized by a fixed low specific gravity of the urine, a rise in blood nitrogen, progressive rise in blood pressure, a rapidly developing anemia, and, most often, the presence of some degree of generalized edema. The treatment is the same as for acute Bright's disease, except protein restriction should not be imposed below 40 grams a day plus the quantity of protein lost each day in the urine. Inadequate protein has much to do with the production of anemia and edema in these cases, and the diet should not be too restricted. Reasonable salt restriction should be employed. The prognosis is uniformly bad, death ensuing in a relatively short period.

If the patient with acute Bright's disease does not develop the subacute stage and does not recover completely, the condition not infrequently passes into the stage of chronic Bright's disease, or **chronic glomerular nephritis.** The pathology is that of progressive inflammatory changes over a long period of time, with destruction of glomeruli and replacement with fibrous tissue until so much of the kidney is destroyed that function is seriously impaired and death ensues. This process may last over many years, and at times may apparently be entirely quiescent and the patient apparently well. The condition is characterized by hypertension, enlargement of the heart, perhaps intermittently edema of greater or less degree, retinitis at times when the condition is progressive and active, albuminuria which disappears as fibrosis progresses, blood and casts in the urine at times and absent for long periods. Normal kidney function is present for a long period of time, and gradually becomes impaired after enough damage is done to the kidney. Polyuria also appears after fibrosis has progressed. There is very little treatment. Removal of any suspicious foci of infection is imperative. The patient should lead an orderly, quiet life, avoiding physical and mental stresses and strains as much as possible, and should by all means avoid chilling or exposure. Any acute intercurrent infection, such as cold, influenza, etc., necessitates that the patient be put to bed and more care taken than in a normal individual, since acute flare-ups of a quiescent chronic Bright's disease are apt to occur under these conditions. No restriction in diet is necessary, and a normal amount of a well-balanced diet with a reasonable amount of salt should be eaten. Needless to say, over-eating and excessive salt should be avoided, as should excesses of any kind. If impairment of kidney function appears, with a tendency toward nitrogen retention, the amount of proteins should be held to the patient's normal requirement; but under no circumstances should rigid restrictions in diet be imposed. This is about the only form of the disease in which drugs are indicated, and the use of theobromine or theophyllin should be employed to help combat the edema. Of equal importance is to be sure that the patient has an adequate protein intake and that the edema is not due to hypoproteinemia.

ACUTE TUBULAR NEPHRITIS is typically represented by the bichloride kidney. The pathology is that of necrosis and degeneration of the tubular epithelium. The disease is characterized by total absence of urine or scanty urine, a very high blood nitrogen, generalized edema, extreme albuminuria and no elevation of blood pressure. The treatment is that of bichloride poisoning, and time does not permit us to go into details at this point.

There is in the late stages of pregnancy a tubular nephritis with uremic manifestations. The pathologic changes are very similar to those seen in bichloride poisoning, and since this type of nephritis is so much involved in problems of obstetrics, we will go no further than to mention it.

There is, however, one type of tubular nephritis, chronic in nature, which deserves emphasis because of therapeutic implications. This is the so-called lipoid nephrosis. The pathology of this condition is that of swelling and degeneration of the epithelial cells lining the tubules, with deposits of lipoid material in the kidneys, liver, lymph nodes and other tissues. There has been much discussion on the nature of this disease, and, while it is all quite interesting, time prevents our going deeply into the subject. Suffice it to say there is such a condition, which is apparently a clinical entity and is characterized by extreme albuminuria with very little associated casts and cells in the urine. There is also a normal blood nitrogen, in ordinary cases normal kidney function by all tests, and a normal or low blood pressure. There is no retinitis. The urine is frequently of low specific gravity, has a milky appearance and contains lipoid bodies that are doubly retractile on spectroscopic examination. Edema is usually extreme. The albumin-globulin ratio of the blood plasma is disturbed, and the usual 4.7 : 2.7 albumin-globulin ratio is frequently reversed. The blood cholesterol is increased to as much as 1200 milligrams per cent. In its pure form, this is a somewhat rare disease, though occasionally is a very pronounced part of other types of nephritis, particularly glomerular nephritis. In view of the character of the condition, it is obviously not a primary disease of the kidneys, but is a constitutional disease of unknown character with marked kidney manifestations. The features mentioned are diagnostic of the disease, and it deserves particular mention because of the special therapeutic implications.

Because of the extreme output of protein through the kidneys, instead of any diminution in protein intake it should be greatly increased. I have seen patients lose one-half the equivalent of their daily protein requirement through their urine each twenty-four hours. This loss of protein, with a depletion of plasma protein, is a large factor in the edema which occurs in these cases, due to lowering of osmotic pressure of the blood plasma from hypoproteinemia. Besides adequate attention to protein requirements in these patients, the use of thyroid extract is indicated in appropriate doses; and, because of the anemia which is a constant accompaniment of the disease, probably due to marked loss of protein, frequent blood transfusions are of distinct help. Removal of all focal infection is very necessary, since there are some reasons to believe that the disease is a manifestation of a pneumococcus infection. This is suggested strongly because many patients die with this disease from pneumococcus peritonitis or other pneumococcus infections. Diuretics, even the strong mercurial ones, are indicated in this condition, and not infrequently several tappings of the abdomen for relief of ascites become necessary.

The prognosis is fairly good, many patients—and probably the majority — recovering entirely without any evidences of impaired kidney function or residual trouble remaining. However, a certain number of cases persist with varying degrees of severity, and eventually signs of a diffuse nephritis, or glomerular nephritis, are superadded and the patient dies from uremia or some other complication of any ordinary diffuse nephritis.

ARTERIAL NEPHRITIS is merely a renal involvement of a generalized arterial degenerative disease and can in no-wise be considered as a primary kidney disease. Arteriosclerosis, having a tendency more or less to involve localized sets of vessels, may show the only outstanding manifestation in the kidneys, though we all see patients with such localized involvement of the vessels of the brain and heart, with perhaps very little clinical involvement of the vessels of the kidney. When the kidneys are predominantly involved, the condition is characterized by a varying albuminuria, which not only varies in extent in different patients, but in the same patient from time to time. Very little or no blood, microscopic or gross, is present in the urine, few casts or none are present, and the kidney function is good in the first stages. Also, the blood nitrogen is normal until the late stages, and there is no edema until the condition results in heart failure, at which time edema of cardiac failure occurs. The blood pressure is almost uniformly elevated, and there is no retinitis, the only retinal changes being those of the arteriosclerotic process which is usually reflected in changes in the retinal arteries. There is a fixed specific gravity in the low range, averaging around 1.010.

The treatment of this condition is that of arteriosclerosis, if any. Knowing nothing, whatever, of the cause and nature of arteriosclerosis, we have no measures at our command which will halt the progress of the condition; and, as it is usually already well-advanced by the time clinical involvement of the kidneys occurs, we would probably be locking the stable after the horse has gone could we use any measures which would halt the progress of arteriosclerosis. The prognosis is good, many patients living over a long period of years in good health and not infrequently dying from some other complication of arteriosclerosis rather than kidney failure.

Under the head of arterial disease of the kidney, mention should be made of a fulminating, rapidly progressing type of Bright's disease, of primarily vascular origin, referred to as arteriolar necrotic nephritis. This disease is the result of an acute destructive process in the small arteries and capillaries of unknown etiology, resulting in destruction of the capillary glomeruli, as well as the arterioles supplying them. This condition, by some writers, is referred to as "malignant hypertension." In common with other types of Bright's disease, not only are the blood vessels of the kidney involved in the necrotizing process, but those of all other parts of the body, including the vessels of the brain. The condition is characterized by microscopic blood in the urine varying in degree from time to time, albumin, casts and leukocytes, increased nitrogen retention in the blood, anemia, greatly increased blood pressure, retinitis, a fixed low specific gravity of the urine, and cerebral symptoms. As to treatment, there can be said to exist none. The disease is a rapidly progressing one, and the outcome is uniformly fatal in a relatively short period of time compared to the other types of Bright's disease. Dietary measures, fluid restriction, salt restriction, etc., have all proved uniformly futile, and nothing apparently alters the course of the disease.

A word should be said concerning the diet in Bright's diseases, particularly with reference to proteins. The etiologic role of excessive proteins in the production of Bright's disease is extremely questionable, and can probably be disregarded. Animal experiments, particularly on rabbits, leading to the conclusion that excessive protein intake leads to nephritis, have been proved fallacious and erroneous. Actual observations on human beings have shown that enormous amounts of protein can be ingested over a long period of time by a normal person without any evidence, whatever, of the production of Bright's disease. Leeds, Tolstoi and McClellan, and Dubois, report men who lived for a year on 100 to 140 grams of protein with no signs of renal damage. Thomas, after exhaustive studies, reported no damage to the Eskimos who live on practically a sole protein and fat diet. More striking is the report of Newberg, Lesses and Johnson on the results of a test in a laboratory worker who for six months took 338 grams of protein and 271 grams of fat per day, the protein being divided between 400 grams of beef liver, 300 grams of veal, 700 grams of lean beef and 100 grams of dry beef. At no time during the test period were there any urinary findings at all indicative of any damage to the kidneys. Investigations seem to establish the fact that any amount of protein which a normal person would habitually consume will not produce nephritis. When Bright's disease is already established, the indications for protein restriction are limited and consist of the acute stages of acute Bright's disease and the stages of nitrogen retention in the course of any form of chronic Bright's disease. There exists some evidence which would point toward excessive protein being somewhat irritating to a damaged kidney, and for this reason, reasonable restrictions of excessive protein intake should be imposed; and a patient with any type of Bright's disease, except chronic tubular Bright's disease, should not exceed an average normal intake of protein. On the other hand, when there are indications for protein restriction, the prohibition of red meat and pork, while at the same time allowing the white meat of chicken and other fowl, with no restriction of other foods of high protein content, is quite illogical. There is no difference, whatever, in the protein of beef or other red meats and that of white meats, bread, milk or any other source of protein material. Any restriction in protein should be on a quantitative basis, with due regard for the minimum protein requirement for the individual; and in cases of marked albuminuria, besides the normal protein requirements, allowance should be made for the loss of protein in the form of albumin in the excreted urine. We have seen edema in association with Bright's disease disappear entirely when sufficient protein was added to the diet to overcome the hypoproteinemia as the result of loss of protein through the urine and the restriction of protein intake.

SUMMARY

The term "nephritis," as connoting a primary disease of the kidney, should not be used, since in all forms of nephritis, kidney involvement is only a part of a constitutional disease; and, instead, the term "Bright's disease, or Bright's diseases, should be employed. The classification of nephritis should be reduced to its simplest terms, and the renal manifestations of Bright's disease are merely involvement of one of the three structural units of the kidneys, i. e., glomerulus, tubules or blood vessels. In any type of Bright's disease, even when the primary lesion is fairly well localized to one structural unit, eventually there occur changes in all other structural units, and it is extremely rare that on pathologic examination a pure form of any one type of nephritis can be found. The treatment is strictly individual, depending upon the type of Bright's disease or the stage of any type of Bright's disease in any individual case.

The Diagnosis and Treatment of Peripheral Vascular Diseases*

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INTEREST on the part of the profession in peripheral vascular diseases has increased greatly in the past few years. This has resulted in the development of large peripheral vascular disease clinics in some of the larger cities in this country. However, notwithstanding these facts, due to the insidious nature of the pathologic process and slow development of symptoms in most of the victims of these diseases, we should from time to time refresh our memories as to the symptoms and diagnostic signs particularly, so as to minimize errors in diagnosis. Such, therefore, together with a discussion of the treatment, are the purposes of this paper.

A large majority of the patients who have organic vascular disease of the arteries of the lower extremities come in complaining of "flat feet." Since congenital defects, poor anatomical alignment and infection do lead to symptoms in the feet. It is, therefore, of the greatest importance to diagnose correctly the condition, as the treatment for the one may be entirely unsuited to the other. Until we learn to analyze more carefully the subjective complaints of our patients and try to determine the causes of them the charlatans and other irregular practitioners of the healing art will continue to reap a rich though unjustified financial return.

Thromboangiitis Obliterans (Buerger's Disease): This is a disease of early adult and middle-aged periods of life. It is an inflammatory disease involving mainly the arteries and veins of the lower extremities. Many different arteries elsewhere in the body including those of the heart are said not to be immune to this affection. Females are very rarely affected. Racial incidence is highest in the Russian Jew but it does occur in the gentile. We have never seen a case in an African. Almost 100% of these patients are heavy cigaret smokers.

The onset may be sudden, but it is usually insidious. A migratory phlebitis may be the first symptoms and antedate other symptoms incident to thrombosis of the arteries by weeks or months. However, the development of the disease may be so slow that the presenting symptoms may be difficult of interpretation at first. But by the time the average patient seeks medical advice one or more of the following symptoms, intermittent claudication, local pain, dependent redness of one or both feet, cold feet and ischemia, will have developed. Symptoms are noticed frequently in one limb much sooner than in the other.

Diagnosis: A carefully taken history and a detailed physical examination are of the greatest importance. The patient is usually between 20 and 45 years of age, Jew or gentile, male, and user of tobacco. One will find redness of one or both feet (one usually farther advanced than the other) when in dependent position and marked ischemia (cadaveric) when elevated. Palpable pulsations in the dorsalis pedis and posterior tibial arteries are usually absent, but may be present in a patient with definite thromboangiitis obliterans. Palpating for these pulsations manually is not wholly reliable but by means of the oscillometer, which we use in every case now, and can ascertain very definite information as to the patency of the peripheral arteries. Cramp-like pain is usually induced by exercise or it may come on when at rest. The patient may relate he is able to walk only one, two or more blocks without pain. Pain prevents sleep in some cases and causes the patients to get out of bed and walk the floor at night. The toe nails show trophic changes fairly early. A dry, taut skin is also evidence of a far advanced pathologic process. The ultimate end is gangrene unless proper treatment is instituted. It is our responsibility, then, at least to make a presumptive diagnosis in these patients when they come to us. Vigorous treatment should be instituted as soon as a diagnosis is made.

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*Read before the Pontotoc County Medical Society.

X-rays late in the disease reveal bone atrophy of varying degree.

Endarteritis Obliterans: In the declining periods of life when the degenerative processes make such heavy inroads upon human life we frequently meet with the condition, arteriosclerotic endarteritis. The lesions in this disease are conspicuous by the absence of an inflammatory reaction in or about the occluded vessel, and there are no red or organized thrombi in the lumen of the affected vessels. This picture then is the antithesis of what is found in thromboangiitis obliterans.

It is probable that symptoms are first noticed long after the arteriosclerotic process first begins, but, just as in thromboangiitis obliterans and probably more so, due to its slow development, time is allowed for collateral circulation to compensate for the impairment wrought by the degenerative process. Finally, however, there comes a time when this compensatory process is broken and is followed by subjective symptoms, which are similar to those encountered in other organic vascular diseases. The symptoms are predicated somewhat upon which portion of the arterial tree the pathologic process is found to be dominant; i. e., whether the largest, medium-sized arteries or arterioles suffer the greatest damage. The oscillometer may reveal no pulse in the main arteries of a limb in a patient with but few symptoms, whereas the dorsalis pedis and posterior tibial pulses may be palpable in another patient who may experience great discomfort in the form of paresthesias of the soles of the feet and toes with marked trophic changes in the nails. Generally, however, the symptoms met with in this disease are quite similar to those we find in thromboangiitis obliterans.

Diagnosis: The age incidence is in patients 50 years of age and older, and this fact is of great diagnostic value. There is often other evidence of arteriosclerosis in the body. Hypertension and diabetes are frequent concomitants of this disease. Migratory phlebitis is absent in obliterating endarteritis while it is present in 25% to 40% of the patients with thromboangiitis obliterans. Pain in the calves of the legs of an intermittent character induced by exercise is common. Most of these patients know their threshold for pain by stating they can walk so many blocks before they have to stop and rest until the cramp-like pain in the calves of the legs disappears. General muscular atrophy of the affected parts is quite marked. There may or may not be pulsations in the arteries of the affected limbs. Symptoms are usually confined to the lower extremities. The skin and nails show trophic changes. Redness of the toes and feet may or may not be marked when the limb is in a dependent position in the absence of infection. Plantar ischemia is dependent upon arterial or arteriolar occlusion. This is an important sign and indicates the presence of arteriolar arteriosclerosis in a foot in which the arterial pulses may be palpable. Just as in thromboangiitis obliterans gangrene ultimately results unless the condition is recognized soon enough and appropriate treatment instituted. Gangrene when it does intervene usually develops more rapidly in arteriosclerotic endarteritis than in the thrombotic type and greatly minimizes the chances of saving the limb.

X-rays of the legs will frequently aid in the diagnosis by revealing calcification of the arteries.

Raynaud's Disease: This is a condition characterized by various degrees of arterial spasm with symmetrical involvement of the extremities.

Women are more often affected than men. It is much less common than the organic vascular affections, in our experience.

Diagnosis: The diagnosis is based on the history and symptoms of intermittent pain, sweating paresthesias in the affected limbs. The disease has been divided into three stages according to the degree and duration of the vasospasm, namely: stage of syncope, stage of asphyxia and end stage with symmetrical gangrene.

The neurosurgeon offers the only worthwhile treatment so far instituted in this disease and therefore will not be discussed in this paper.

The more complicated diagnostic tests, such as measuring the skin temperature by means of the Tycos dermatherm, are purposely omitted as the purpose of this discussion is to acquaint ourselves with the more common subjective symptoms and objective signs that will better enable us to diagnose these diseases at the earliest possible time. The more technical diagnostic tests are of most value, anyway, in aiding in the differential diagnosis of doubtful conditions.

Treatment: A great deal is being done for the victims of the obliterative arterial diseases, and many limbs which formerly were sacrificed are being saved and made useful again by the use of the present day conservative methods of treatment. The primary purposes in treating peripheral vascular diseases must be to relieve symptoms, to prevent gangrene and to facilitate restoration of physiological balance to the circulation. If gangrene has already developed we must attempt to prevent further death of tissue and save the limb if possible.

We maintained in the clinic a conservative attitude in the treatment of these conditions. Radical surgery has been the method of choice only as a last resort to save the patient's life, or for intractable pain due to ischemic neuritis.

Most of the patients with thromboangiitis obliterans who come to the clinic present moderate to severe symptoms. Patients with more severe symptoms are given bed rest for a variable period of time. Foci of infection receive appropriate treatment. Smoking is forbidden. The nurse is instructed as to the proper hygienic care of the feet, and when the patient is dismissed he is given a list of instructions in the care of his feet. At all times every precaution must be taken to prevent the slightest trauma to the affected limbs. The feet are kept warm at all times. This may be done with a heat cradle, by "hot soaks" and by wrapping the limbs in wool or cotton. Cradle heat is tolerated well by some patients. One must be certain that the bulb is well removed from the feet in order to prevent the possibility of burns.

Postural exercises: Buerger instituted certain passive exercises which are inducive to the production of hyperemia. The induced hyperemia in turn is believed to aid in bringing about a better collateral circulation. The degree of improvement in the patient is more or less in direct proportion to the increase in the collateral circulation. The induced hyperemia may also facilitate canalization of the occluded arteries.

Buerger's exercise consists of: 1. Elevating the affected part to 60 to 90 degrees long enough for the veins to empty, and the maximal depth of paleness to develop (1 to 2 minutes); 2. Lowering the part to the dependent position until the veins fill and the maximal degree of hyperemia appears (2 to 3 minutes); 3. Placing the parts on the level for 5 minutes with the body reclined. It requires from 8 to 10 minutes to complete the cycle, and an hour of this exercise constitutes a seance. Three to six seances should be given daily.

A few years ago Allen made a valuable addition to the Buerger exercise since which time they have been known as the "Buerger-Allen" exercises. Allen's contribution consisted of adding active muscular exercises to the limbs when in the dependent phase of the Buerger exercise. This consists of hyperextension and hyperflexion, inversion and eversion of the feet and spreading and closing of the toes. To these we have added crumpling and relaxing of the toes.

Drugs: It is well known that a certain amount of vasospasm is associated with the obliterative vascular diseases. This is especially true in thromboangiitis obliterans. Therefore, our patients are given antispasmodics such as are indicated. We hold a wholesome respect for heat as a vasodilator and use it freely. However, in the past few years, mecholyl (acetyl-beta-methyl-choline-chloride) a definitely potent vasodilator, has been introduced. We have been using this drug for about two years with splendid results. It is used orally and by means of iontophoresis through the application of cloths saturated with 1-500 dilution of the drugs wrapped about the affected limb. When using this agent susceptibilities and idiosyncrasies must be kept in mind and untoward reactions avoided.

Intravenous therapy: In 1911 a Japanese, while working on the viscosity of the blood found this to be definitely elevated in some cases of Buerger's disease. Since then various writers have made favorable reports on the results from the use of sodium citrate and hypertonic saline solution in the obliterative arterial diseases. We use hypertonic saline solution routinely along with other methods of treatment, in the absence of contraindications such as nephritis, senile debility and cardiac disease.

Artificial fever therapy: Encouraging results have been obtained in a number of patients by the use of artificial fever produced by the superpower diathermy machine. Caution must be exercised in the selection of patients for this method of treatment. In severe arteriolar arteriosclerosis this method may result in blisters on the toes which are undesirable and will be hard to heal.

The same results may be had and the same caution must be taken in treating obliterative peripheral vascular disease with the Kettering hypertherm. It is likely that blisters and death of tissue may be more easily produced by the latter method due to the hot air plus the systemic fever.

Treatment by changing the environmental air pressure (Pavaex): Previous to the popularizing of this method of treatment by Herrmann our patients improved very slowly no matter which or how many other methods of treatment were employed. Moreover, there were many patients with trophic ulcers who eventually lost one or both limbs because of our inability to heal the ulcers or relieve the pain of the ischemic neuritis. However, for the past three years we have had three of these machines in operation and our results have been decidedly better. The patients have been relieved of their subjective complaints much quicker than by former methods of treatment. Since July 1935 when we began using pavaex through August 1938 approximately 2.080 hours of treatment have been given. In several patients who had endarteritis obliterans with trophic ulcers that would not respond to any other method of treatment, healing has been secured by the use of this method. Noteworthy is the fact that collateral circulation was improved sufficiently in these patients that they have had no additional ulcers to appear. However, in some with the most severe type of obliterative endarteritis, with or without trophic ulceration, this or any other method of treatment so far tried has failed to save the limb. This is especially true in the diabetic with gangrene.

Just as with the application of every other method of treatment, the patients must be selected. Generally speaking, phlebitis, lymphangitis and cellulitis, serve as contraindications to the use of changing the environmental pressure. If an ulcer is present it must be rendered as neary bacterial free as possible before being treated by this method. Whether to treat or not to treat such a patient by this method must necessarily rest upon one's own personal judgment.

Venous occlusion therapy: During the past few months we have been using a method whereby the return venous blood flow is intermittently occluded and released by means of a pneumatic cuff about the thigh or arm. This induces intermittent hyperemia below the cuff without imposing any effort whatever upon the patient; in fact he may sleep while the treatment is in progress. The principal use we have found for this method is in the patient who has a chronic type of phlebitis, or in the ulcer patient with infection. This treatment can be given while the ulcer is being disinfected and this saves valuable time for the patient.

Conclusions

1. Diagnostic and therapeutic interest in peripheral vascular diseases has increased greatly in the past few years. This interest is confined mainly to the large medical centers, and therefore, lacks dissemination.

2. At least a presumptive diagnosis can be made in most of the patients with peripheral vascular diseases upon a well-taken history and carefully made physical examination and without the aid of the more technical diagnostic tests.

3. Insufficient time and attention given to the signs and symptoms can be too frequently credited for the errors in diagnosis.

4. Results from conservative treatment previous to the past few years was poor at best.

5. Modern conservative methods of treatment with passive vascular exercises, postural exercises, other measures inducive to hyperemia, iontophoresis, intravenous therapy, better general care of the feet and the earlier recognition of the condition have materially improved the outlook and end results in patients with organic peripheral vascular disease.

6. Many limbs are being saved and restored to some degree of usefulness by the present therapeutic regime that were formerly amputated.

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The Present Day Treatment of Gas Gangrene: Case Report *

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Introduction

We all agree, I believe, at the present time to the great importance of gas gangrene in civil life. Following injuries sustained in the World War, gas gangrene was common, as evidenced by the Surgeon General's report in 1929, in which he calls attention to the symbiosis of various aerobes and anaerobes.

"In the Base Hospital No. 15, A. E. F., seventy-three cases of gas gangrene with death, activity of the gas bacilli was self-limiting and practically confined to the first week after the wound was received, with a drop in anaerobes from 38 to 7 per cent during the first seven days, as the common pyogenins, streptococci and staphylococci, accumulated rapidly in the wound. The symbiotic effect was particularly prominent in fatal wounds. Infection with anaerobes alone showed a high death rate, but a short period of danger to life. A streptococcic bacteremia was, by far, the most important cause of death, especially in patients living beyond the first week, which was roughly established as a self-limiting period of the gangrenous process and many deaths attributed to the anaerobes were in reality deaths due to streptococcus in the process of replacing them. This report is very interesting and it is seen from it that more than two-thirds of the severe, anerobic bacilli failed to develop gangrene, all of these cases being under observation at least five days, and many of them as long as two weeks. These bacteria are incapable of producing gas gangrene by their presence alone and must be accompanied by the failure of circulation, the extensive cellular damage of large quantities of muscle, and in all probability, by constantly progressive increase of this series of factors."

I believe that this condition is becoming more important at the present time because of the number of crushing wounds and lacerations due to high-powered machinery in industry and automobiles. Motorcycle injuries are more prone to produce this, in my estimation, than the automobile. The frequency of its occurrence is hard to determine accurately because of the fact that so many cases are not reported.

Bacteriology

It was originally thought that gas gangrene infections were due to the specific organism, B. Welchii, but this has been demonstrated to be erroneous because there are many other anaerobes which may cause this disease, as well as the common pyogenic bacteria which in symbiosis grow with the gas bacillus itself. Numbers of these various anaerobic organisms, such as vibrion septique of Pasteur and Edemantine's bacillus histolyticus may play an important part, also, and these organisms may be introduced from the outside. It must also be remembered that they are found in the intestinal tract of men as well, and the work done by our own H. A. Gamble of Greenville, Mississippi, in the treatment of perintonitis by the open method has demonstrated clearly that these anaerobes produce gangrene of the abdominal wall following surgery, most commonly upon the gastro-intestinal tract, appendix, and gall bladder.

Pathology

It is an agreed fact that these infections must occur in a closed wound or a closed cavity and their development certainly varies with the blood supply, with the amount of tissue destroyed, with the presence of foreign bodies, with the resistance of the patient, and virulence of the bacteria present. It has been by experience that the disease travels both by muscle and facial planes. Gas produced by this infection is explained by the conversion of the glycogen in the living muscle into dextrose and isomaltose, after the development of necrosis, being fermented

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*Read before the Houston Hospital staff meeting, Houston, Miss., January, 1939.

by the gas bacilli.

It is believed that the gas in itself is not toxic but that its compression produces an ischemia and decreases in blood supply to the various parts and prevents oxygenation. The toxin generated in the tissue, of course, damages all blood vessels present and tissue with which it comes in contact, making the muscle soft and mushy and changing the color to a dark brown, or possibly, when the necrosis is predominating, the color may be a brick red or a salmon color. Usually there is a lack of leukocytosis and the body has difficulty in overcoming the infection. The spread is particularly rapid. The fluid encountered on incision is brownish and of a sickening sweet odor. Death produced by gas gangrene is toxic in nature, producing a paralysis of the cerebral centers, but death quite often comes from the symbiotic organism, gaining entrance to the blood stream at this site.

Concurrence

Gas infection usually occurs in five types of wounds. (1) Crushing injuries in which the skin is torn, (2) Puncture wounds with a great deal of hemorrhage, particularly if a foreign body has been implanted, (3) Extensive laceration of tissue with gross soiling of dirt, (4) Badly soiled compound fractures, (5) Soiled wounds in which the blood supply is partially or wholly destroyed. It seems that gunshot wounds and compound fractures have been quoted to offer the most favorable conditions for the development of this disease since damaged muscle tissue is the best medium for its growth and development, but it has also been reported to follow abortions, as well as hypodermic injections, particularly where adrenalin has been used to interfere with the blood supply around the hypodermic injection. Abdominal operations of all kinds are also noted to have been the source of this infection.

Treatment

The best treatment for gas gangrene is prophylactic. However, attempts have been made for immunization with toxoid. It is not definite that such an immunization will prove to be effective, and even if it should be effective, it is not likely that in peace time gross immunization should be carried out as a preventive measure. Debridement properly carried out with adequate exposure of the depths of the wound and elimination of all dead spaces or pockets, followed by the placing of Dakin tubes in its depths, seems to offer the best prophylaxis towards its development. Of course, the prophylactic use of antitoxin combined with tetanus should be carried out, but, since the patients frequently develop gas gangrene following the prophylactic use of antitoxin, it must be noted that some part of its origin is mechanical. Therefore, I believe that it must be kept in mind that the treatment of this condition is totally *surgical* at all times. When gas gangrene develops, surgical treatment becomes of paramount importance. Complete exploration of all its pockets must be carried out and since serotherapy is at present accepted, it is very important that massive doses of serum intramuscularly, as well as serum dilated in saline intravenously, must be given diligently. The amount to be used and the frequency of administration can be only determined by the patient's condition and his response to treatment, but it must be remembered that serum cannot supplant surgery and can be used only as an adjunct to it. Sulfanilamide has come to rest in its place in the treatment of this disease, after much work has been done in the past two years with it. It is believed by all those who have tried it that the white cell response of the body is not inhibited or aided by this drug, but it acts directly to inhibit the growth and multiplication of bacteria. It seems to offer some prophylactic effect used in that manner, but certainly since it does these things there must be a place in the treatment of gas gangrene to aid in the destruction of symbiotic bacteria, as well as its inhibitory effect on the gas bacillus itself. Some work has been reported on the use of x-ray therapy in this disease, but sufficient work has not been done either to condemn or to approve this type of therapy.

I believe that the most important treatment of gas gangrene is by aeration of the tissue by the use of the scalpel, used extensively in all areas carrying the gas, by the introduction of Dakin tubes deep into tissue which will bleed easily, and by the use of some solution which has an oxygenizing power (of which I prefer permanganate of potash because of its easy action on the tissues themselves and because it liberates oxygen when in contact with the tissues).

It must be remembered that acidosis favors the infection and at any time that surgery is indicated certainly ether or chloroform, or any other anesthetic which produces acidosis, should be avoided. Evipal used intravenously proved well tolerated in the case herein reported.

General supportive measures and systematic treatment using intravenous fluids or blood transfusions, of course, are a part of the picture.

Attention is called to the rapidity with which cases in which there is no symbiotic infection present may recover, as in the following case report:

Case Report

C. H. White, male, age 27, married, was admitted to the hospital 7-17-38, following an altercation in which he was cut by a sharp knife in the antecubital fossa of the right arm, the incision being from the inner surface just above the medial condyle of humerus swinging down and outward through the fossa to the lateral edge of the upper forearm. He was seen by the house staff, at which time considerable blood had been lost and patient was in shock. With local anaesthesia the vessels bleeding were clamped, he was given glucose by vein and the wound repaired. It was noted in the record that the median nerve was severed and its two ends were ligated at this time. The (Fig. 1) fact was not recognized by the attendant that there is no collateral circulation at this point and the percentage of gangrene is very high. A ligation of the axillary artery is a safer procedure as a good collateral circulation is usually easily established. But, no note was made of same. The patient was given 199 cc. 5% glucose in saline and 600 cc. citrated blood. 500 cc. of citrated blood were given twice during the day. One prophylactic dose of gas bacillus and tetanus antitoxin were given. It was noted by the house officer that the forearm was blue in color and swollen. Sulfanilamide grs. XX were given every 4 hours, or 120 grs. per day by mouth, also hot boric acid packs to the arm. On July 18, 1938, another prophylactic dose of gas bacillus and tetanus antitoxin was given and the forearm was almost black in color.

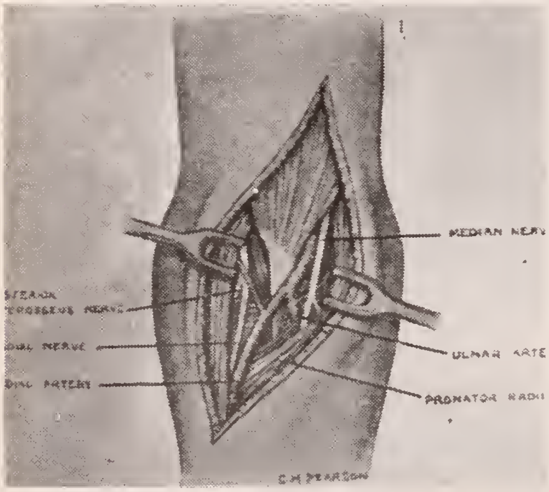

Fig. 1. Anatomy of Ante-Cubital Fossa. (Postgraduate Surgery—Appleton-Century).

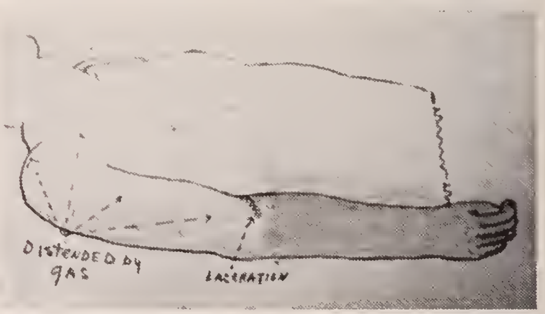

Fig. 2. Drawing, showing black forearm and hand, laceration and gaseous distension of shoulder girdle and hand when seen by author.

I was called in consultation at this point and found the forearm blue-black, swollen, and lifeless from the elbow down. The (Fig. 2) patient's pulse was 140, temperature 101 °F, respiration 24, and he was toxic and semicomatose. There was crepitation in the arm, shoulder, over the pectoral area in front and top of the shoulder, and over the scapula posteriorly. I immediately advised surgery and under intravenous anaesthesia with evipal, literally slashed the arm and shoulder girdle, obtained gas and serum, and inserted Dakin tubes. The lower forearm was ignored as I felt that the patient was too toxic to amputate at this moment although the original wound was reopened. Continuous permanganate solution was dripped through all the Dakin tubes. Transfusions were given, glucose and saline, 40,000 units of gas bacillus antitoxin in 1000 cc. saline mixture. Temperature and pulse came to 100 and 101 respectively on July 19, and July 20, and on July 21 under intravenous anesthesia the arm was amputated in the mid-third in the good healthy tissue without the use of a tourniquet. It was rapidly accomplished in the simple guillotine manner. Dakin tubes were placed in the stump and a permanganate solution drip in all tubes continued as before. The sulfanilamide was continued at dosage of 120 grains per day. Prontosil was substituted when he was unable to retain same by mouth, using 10 cc. to equal the 20 grain dose of sulfanilamide. 20,000 units of gas bacillus antitoxin were given intramuscularly, and 20,000 units in saline intravenously. His general condition was good, he was quite rational in conversation, and seemed to be progressing nicely on recovery from the anaesthetic. On July 22, 1938, the sulfanilamide was reduced to 60 grains per day and the gas bacillus antitoxin to 20,000 which was given in the muscle. The maximum temperature from this point was 99 4-5 °F, and his progress was uneventful. The sulfanilamide was continued until July 26, which was the fifth operative day, and then discontinued. The permanganate solution was discontinued on July 27, and hot boric acid wet dressings applied to the guillotine stump. On the seventh postoperative day he was sitting up and on the ninth post-operative day he was sent home. He returned daily for dressings of the incisions made and the stump. (Fig. 3).

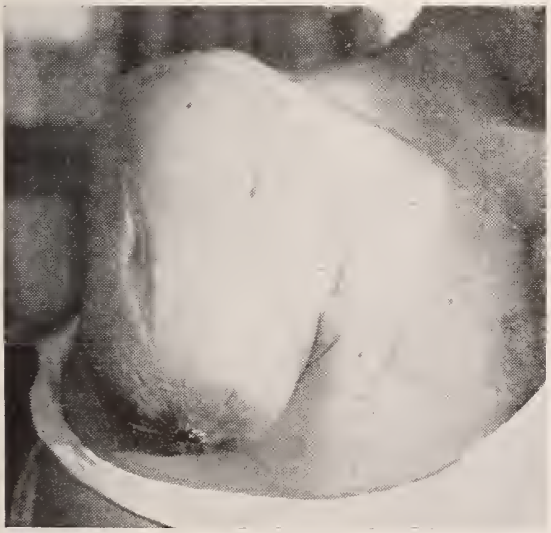

Fig. 3. End Result, showing multiple incisions and guillotine stump of arm.

Summary

1. A knife wound resulting in the loss of blood supply to the forearm unrecognized.

2. When seen by the writer, surgery (multiple incisions) in the crepitant tissue, aeration by tubes and permanganate solution, and wide opening of the original wound were done.

3. 80,000 units of gas bacillus antitoxin were used in the vein and in the muscle, (a double prophylactic dose was given the day of wound.)

4. Sulfanilamide grains 120 from July 17, to July 22, first five postoperative days and then reduced to 60 grains for four days (840 grains total.)

5. Amputation (guillotine) rapidly done without tourniquet after patient had overcome shock and some toxicity.

6. Uncomplicated recovery.

7. Supportive therapy, glucose, saline, and blood in vein.

Acknowledgement is hereby made to Dr. S. W. Thorn, interne, for his diligent attention to this case.

Conclusion

The following points are noted to be of value from the above:

1. The importance of this disease and its frequency in accidents is called to your attention.

2. The bacteriology with the symbiosis of pathogenic organisms is noted.

3. The demonstration of gas beneath the tissues early is important.

4. The important therapeutic measures in series of importance are as follows: (a) the use of the scalpel and aeration of the tissues, (b) the use of antitoxin, (c) the use of sulfanilamide to inhibit the growth of the gas bacillus, as well as the symbiotic growth, (d) the avoidance of acidosis, (e) general supportive measures and systematic treatment.

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Some Experiences In Simple Methods Of Treating Fractures*

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IN OUR early experiences in the field of surgery the treatment of broken bones was not a very fascinating part of our work. But because of the fact that it has been necessary during our years of experience, and apparently has become more necessary in this machine age in which we are now living, to take care of all kinds of injuries, including fractures, this work has grown more interesting. Our procedures in handling these cases has been to study and put into practice the most simple methods available. In other words, the general principles concerning the technique we have followed and are now following are those that will do the least harm and the most good, and when it becomes necessary to resort to a more complicated procedure, we prefer that such cases go to an orthopedic surgeon rather than to assume the risk that a general surgeon of our caliber might regret.

Now, the subject of fractures is, of course, too broad to discuss in a paper of this kind except in a general way, and I propose to give nothing more than some well-known principles in the treatment of fractures, followed by some slide demonstrations of a few cases we have had during the last eighteen months. First, let us discuss the treatment of shock following injury of any kind, including fractures, and especially those compounded. This procedure, namely, the treatment of shock or first aid, is not only well-known to the profession, but also to many lay people who are being informed. It is our experience, however, that this first great principle in the treatment of any kind of wound is frequently sorely neglected, and is the greatest cause of serious trouble with an injured person. Even yet a few of our patients are rushed to the hospital with broken bones with no form of splinting and no effort having been made to prevent further shock. It is, therefore, the duty of us as doctors to do more missionary work in our respective communities among the lay people, and especially drivers of automobiles, in informing them concerning the principles, which I shall give briefly as follows:

Leave the patient in a slightly inclined position, head lowered, administer morphine if possible, splint broken bones with any form of bracing material, keep patient warm, and administer hot stimulating drinks, preferably coffee. If patients are severely shocked, do not carry them anywhere until the shock has been overcome to some extent, after which time they should be removed to the hospital or a place for permanent treatment on a cot or stretcher in the easiest possible manner. Prophylactic doses of tetanus and perfringens antitoxin should be administered in all compound fractures.

After the patient has been removed to the hospital or a place for permanent treatment, it is necessary and of utmost importance to fix all fractures as early as possible. It is not well, however, to proceed until the patient has overcome the shock sufficiently to undergo the necessary procedure. The judgment of the physician in this, as well as the form of anesthesia used, if any, is of the greatest importance. Many cases of fractures can be adjusted by injecting novocain at the fracture site. Fractures of the lower extremities can more easily be adjusted under spinal anesthesia if the patient is in the condition for this. Gas-oxygen in our experience is the least harmful of the general anesthetics. Many fractures can be adjusted early by manipulation and extension. The proper splint should then be applied to hold the broken bones in position and immobilize the affected limb.

Oblique fractures of the long bones, as a rule, will not stay in position at first because of muscular contractions. These should be treated by extension, and in our experience the least harmful and one of the surest methods of getting extension is by skeleton traction, using Kirschner's wire through the lower extremity of the bone affected to which an extension apparatus is attached. This procedure in most cases can be done by local anesthesia, and we have never had any trouble as a result of the use of this wire.

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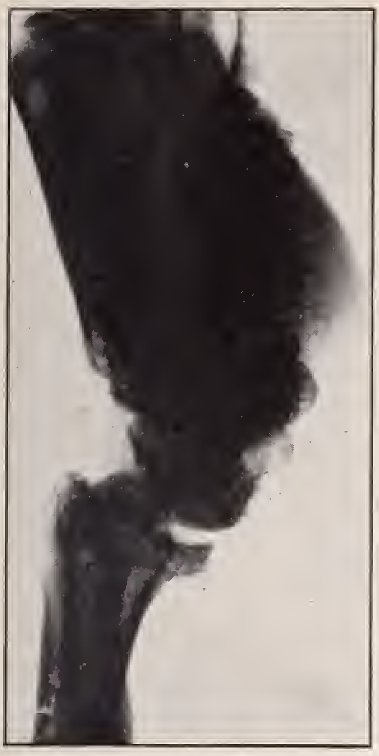
*Read before the Northeast Mississippi Thirteen-County Medical Society, Tupelo, Miss., Dec. 13, 1938.

Now, it is occasionally necessary, and I think reasonably safe, for those of us doing general surgery to do an open operation on fractures where interposing tissue or other causes prevent adjustment of the fragments by closed methods, and I think by carefully considering certain mechanical principles, such as securing reasonable lock of some kind of the bone fragments, or inserting the sharp point of one fragment into the forearm of the other, we can secure fixation that will hold until cast is applied and afterwards continue to hold until union results, thus eliminating the necessity of bone plates in a huge majority of cases. Also in a few instances in oblique fractures, we have obtained good results with a Martin-Parham band without injury to the bones. In all cases we depend on splinting, preferably with plaster of Paris, to hold fragments together and to keep the limb straight and mobile. All such splints should immobilize the joint below and above the fracture, and with the exception of the airplane splint for fractures of the upper arm, plaster of Paris is the choice in our experience.

A word about compound fractures; a thorough cleansing of the wound and adjacent skin is of the utmost importance, after which a thorough debridement is indeed essential. No great amount of tissue should be removed, but a very thin portion of the entire wound with a very sharp scalpel or sterile razor is the greatest thing in the world to prevent infections in any wound. An effort should be made to stop the blood without ligating very small vessels by packing, clamping, etc. Those vessels necessary to be ligated should be tied with the very smallest size catgut. This is followed by irrigation of the wound with large quantities of sterile saline solution further to wash out any foreign matter left in the wound. After this is done the bone should be adjusted as we have already stated by the most simple method possible. If the wound has gotten this attention in the first twelve hours in the majority of cases loose closure in recommended, followed by the necessry splinting, as we have already outlined.

After treatment of all fractures, is the proper treatment of the general condition of the patient. We should watch those compounded carefully for infection, follow the progress of the case with frequent x-ray pictures, and when union is complete, massage, diathermy, and motion in the neighboring joints are of great importance. Carefully and cautiously allow the use of the affected limb in a gradual way.

Now, you will notice in my paper about the only procedure I have recommended that could do harm is the open operation where interposition of tissue or other mechanical courses prevent the bone fragments from being adjusted, securing a form of mechanical lock or using the Martin-Parham bands to hold fragments together, and for bone extension the Kirschner's wire. Even in fractures of the olecranon and kneecap, we have obtained splendid results with suturing with kangaroo tendon or fascia lata. If there is anything that I should like to impress most in this paper it is the necessity of all of us giving more careful attention to the treatment of shock or first aid in all injuries and impart this knowledge to the public. As to the technique of treating the fractures themselves, I am convinced that a majority of us away from orthopedic centers should be content to adjust and hold our fractures in position by the most simple methods possible; to practice the least harmful procedures; and to refer those requiring more complicated procedures to the orthopedic man himself. In my opinion, however, we can take care of about 90 per cent of all of our fractures and get reasonably good results by the methods we have tried to follow.



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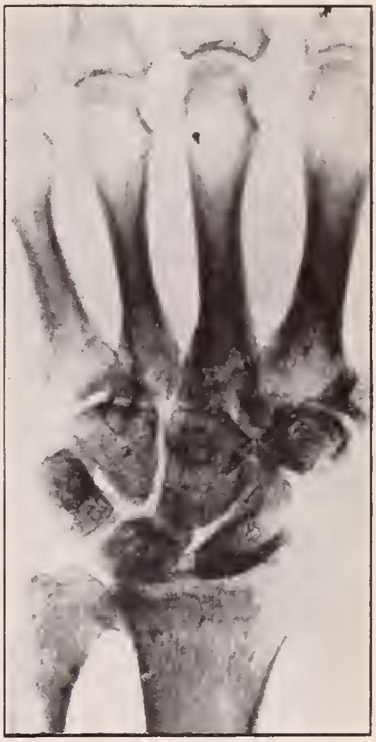
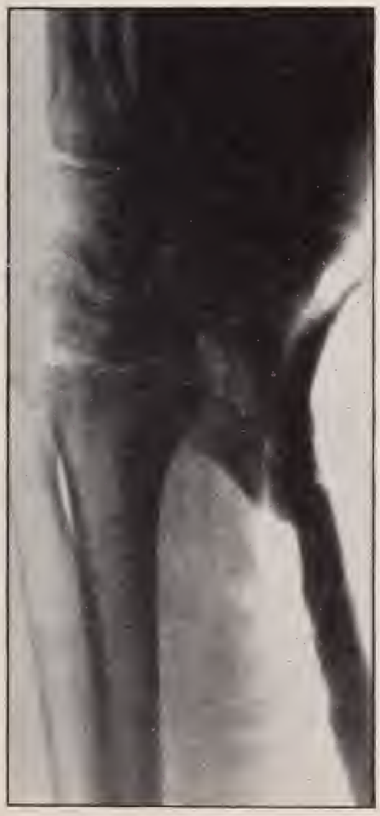


Mr. J. F. S.—Age 70—Dislocation right wrist joint. No reduction for two months. Reduction then made by open operation.

RESULT: This dislocation occurred recently and patient still in cast.



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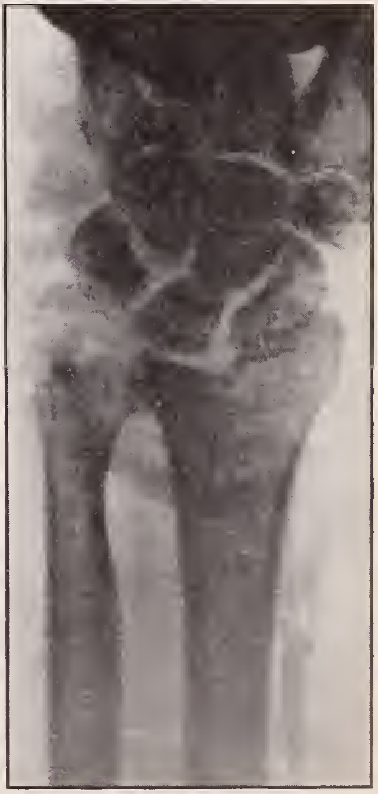
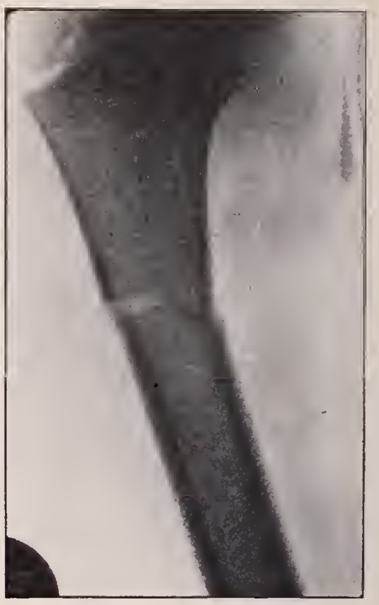


Before efforts to reduce

Master R. M. B.—Age 8—Fracture upper third of humerus. Application of aeroplane splint, extension by Kirchner's wire through lower end of humerus.

RESULT: Union complete. Function good.

After efforts to reduce



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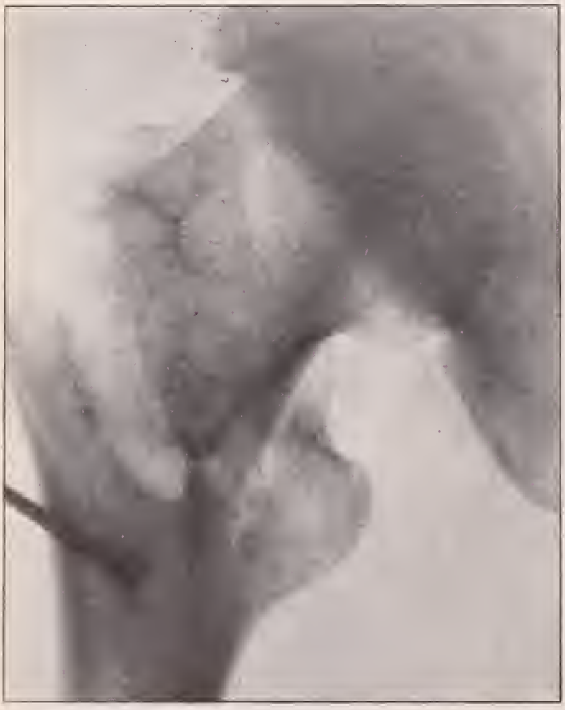

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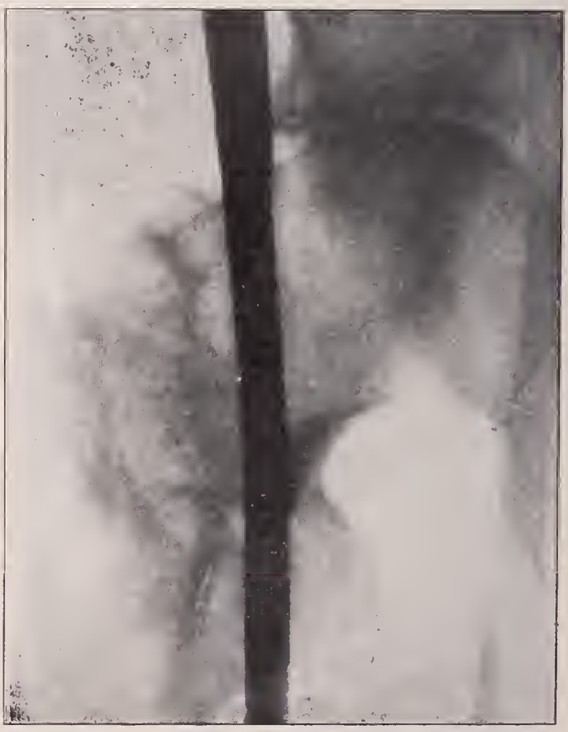
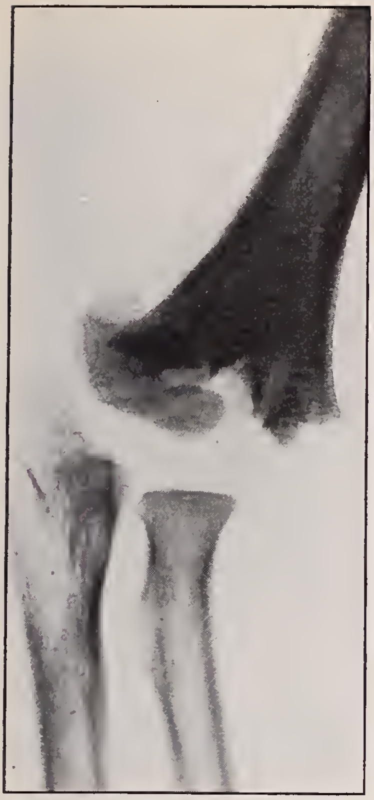
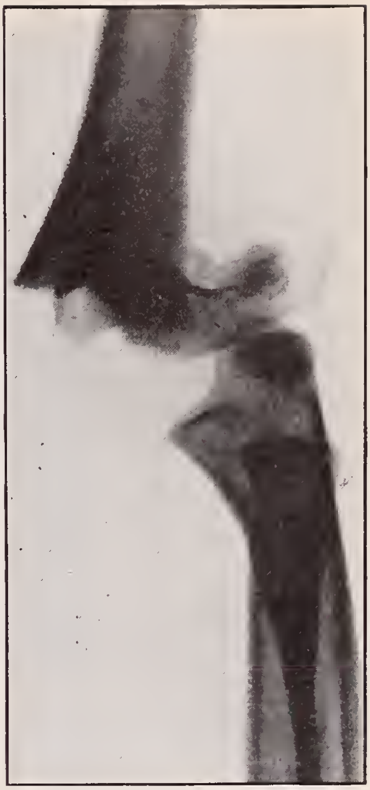


W. S.—Age 70—Fracture of neck of left femur. Fixation of fracture in Whitman's position. Application of spica plaster of Paris cast.

RESULT: This fracture occurred recently and patient still in cast.

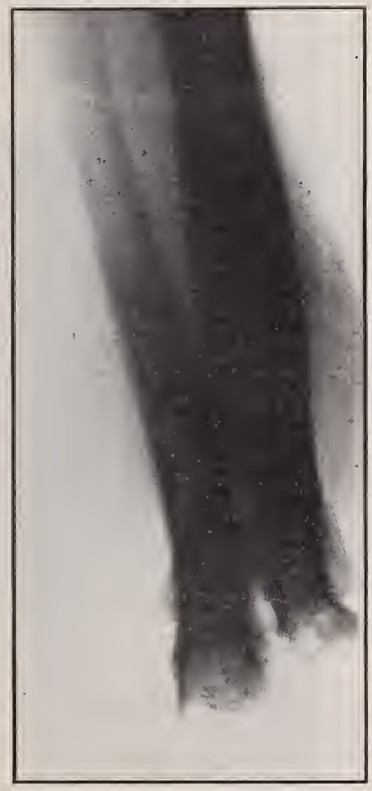


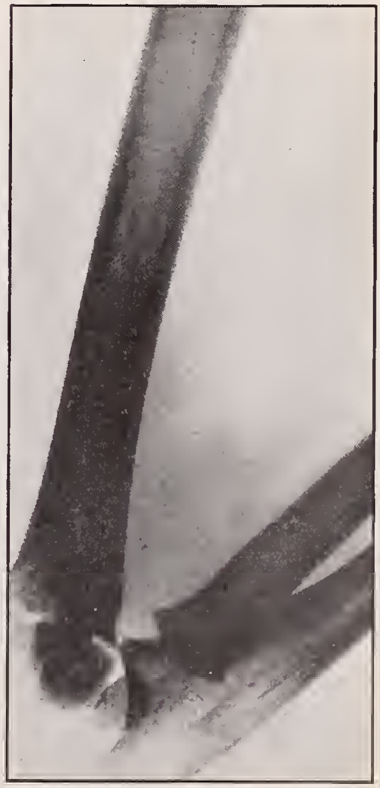


Before efforts to reduce

H. K. — Age 7 — Fracture through distal end right humerus into elbow joint. Fracture reduced, fixed in Jones position and bandage applied.

RESULT: Union good and function good.





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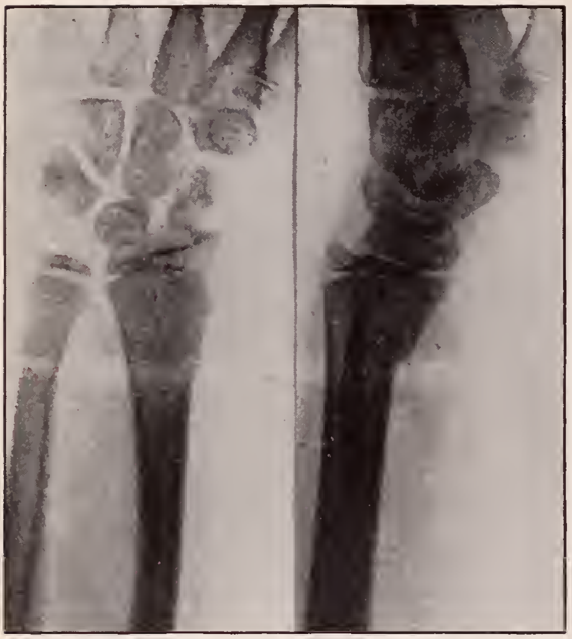

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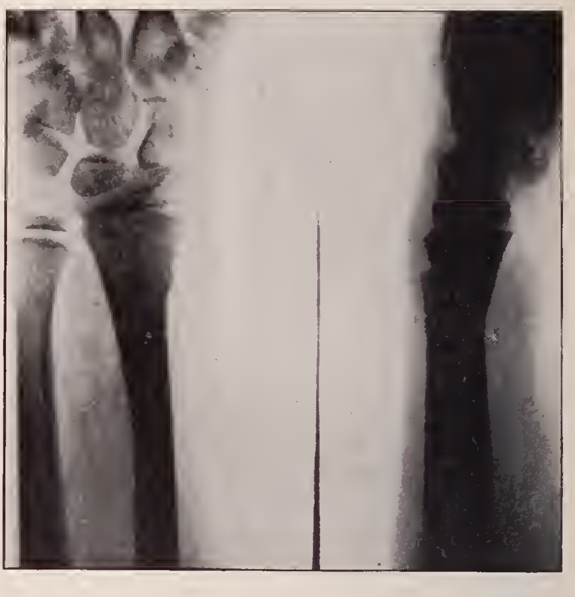
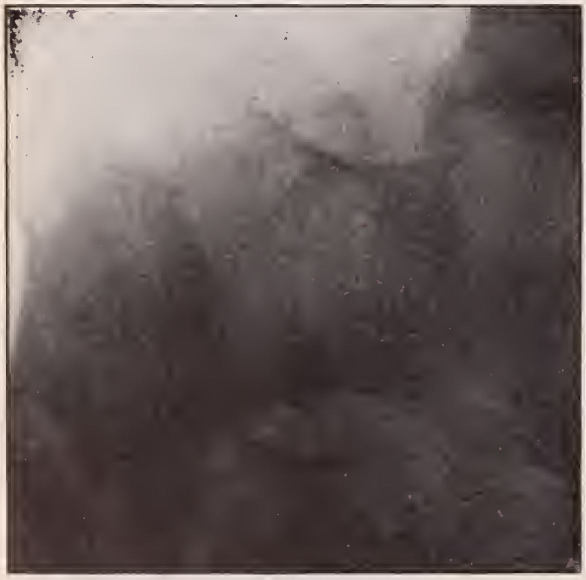


M. F. D.—Age 10—Incomplete fracture lower end of radius. Reduction of fracture application spica plaster of Paris cast.

RESULT: Union complete. Function good.

Before efforts to reduce



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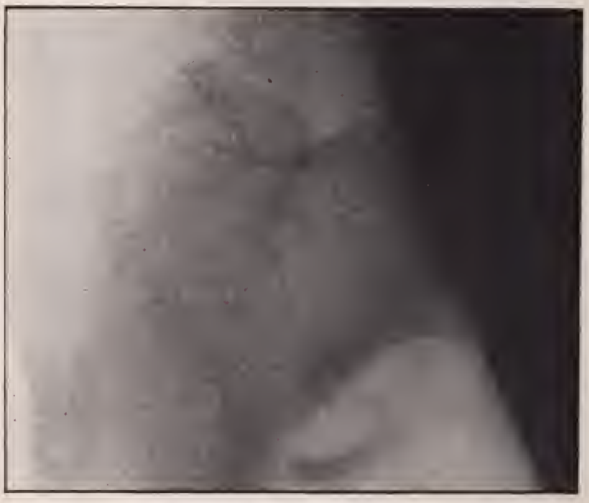
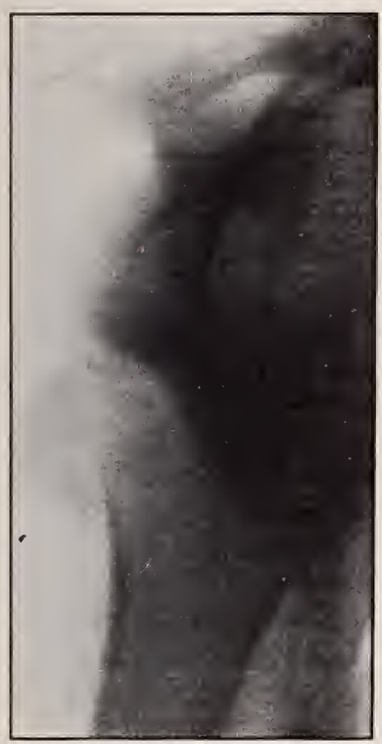


Mrs. G.—Age 67—Fracture of neck of right femur extending through greater and lesser trocanter. Adjustment of fracture in Whitman's position. Spica plaster of Paris cast applied.

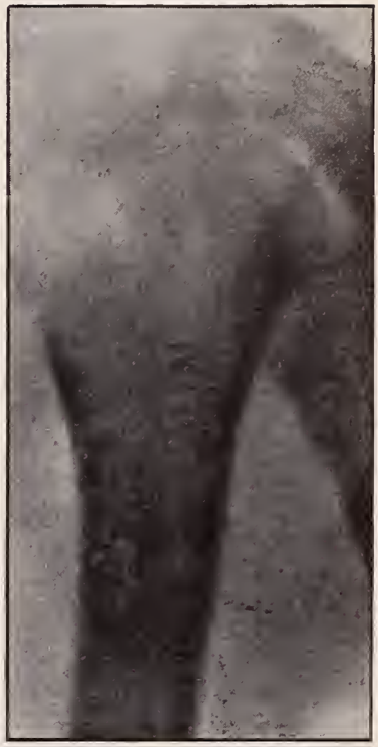
RESULT: This fracture occurred recently and patient still in cast.

Before efforts to reduce



Mrs. E. B. A.—Age 42—Dislocation of shoulder of six weeks duration. Fracture of head of humerus. Open reduction.

After efforts to reduce



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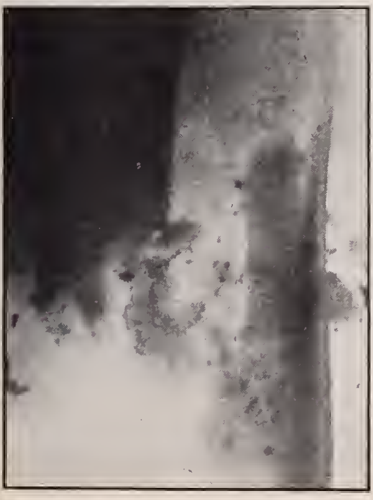
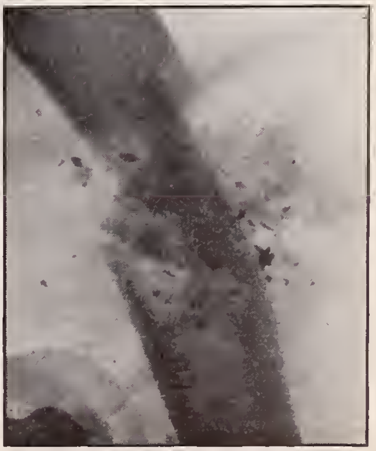


B. C. — Age 18 — Compound, comminuted fracture of upper third right humerus as result of gun shot. Open reduction, debridement of wound, aeroplane splint with extension by Kirchner's wire through lower end of humerus.

RESULT: Union complete, very slight deformity, function fair.

After efforts to reduce



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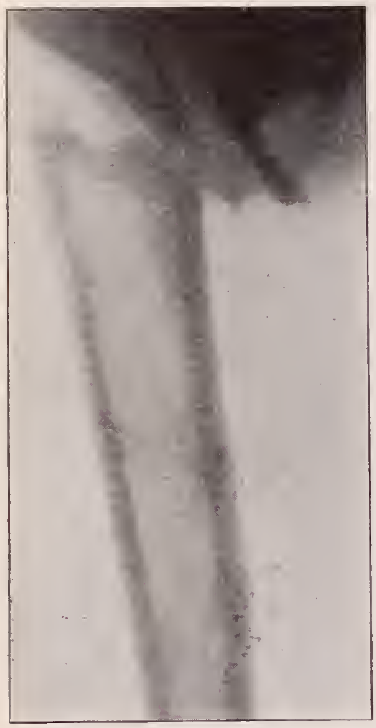

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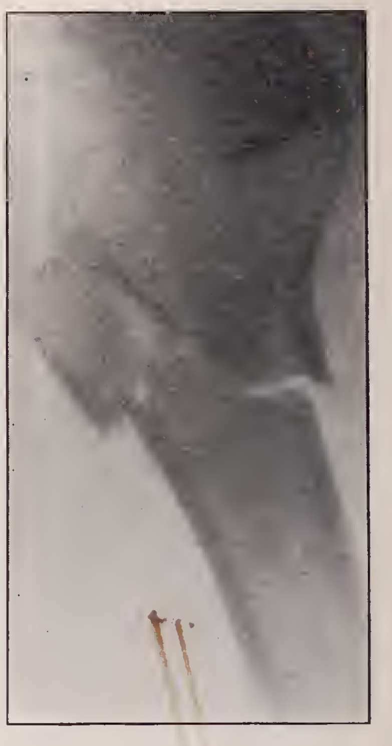
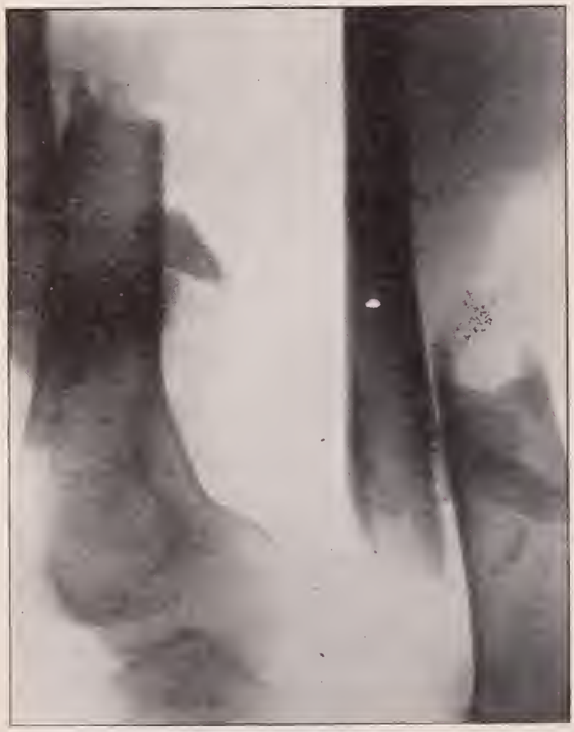


Mrs. W. A. B.—Age 35—Comminuted fracture of surgical neck and head left humerus, aeroplane splint, extension by Kirchner's wire through lower end of humerus.

RESULT: Union complete. Function fair.

Before efforts to reduce



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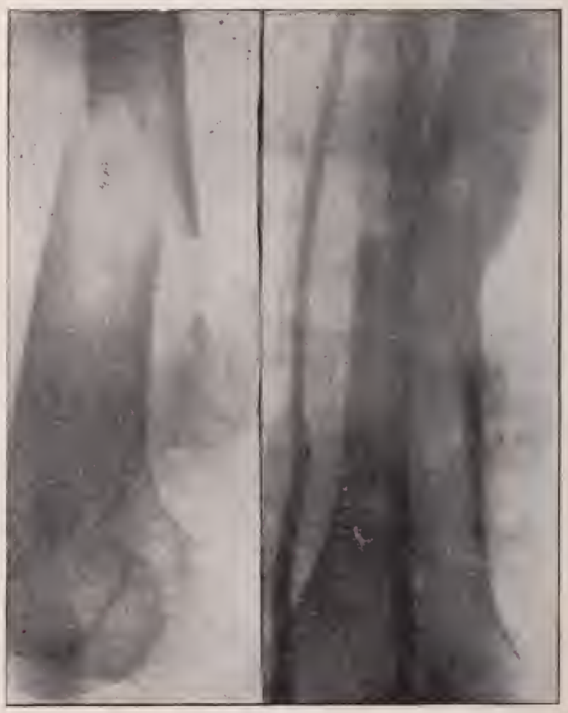
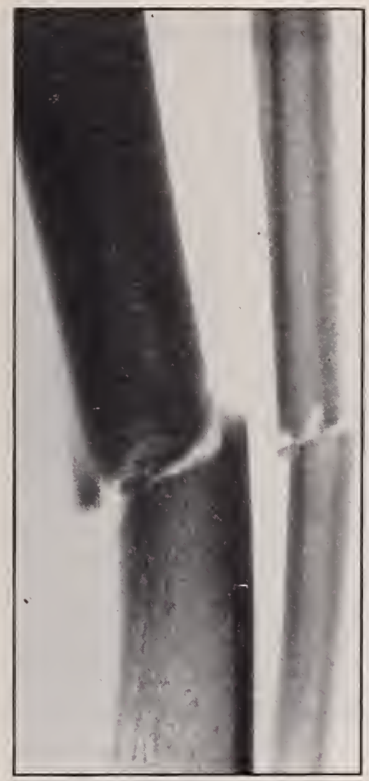


D. R. H.—Age 64—Compound fracture junction lower middle third. Open reduction. Enlongated corner of lower fragment inserted in medullary canal of upper fragment. Plaster of Paris case applied.

RESULT: Union complete. Function 75% and improving.

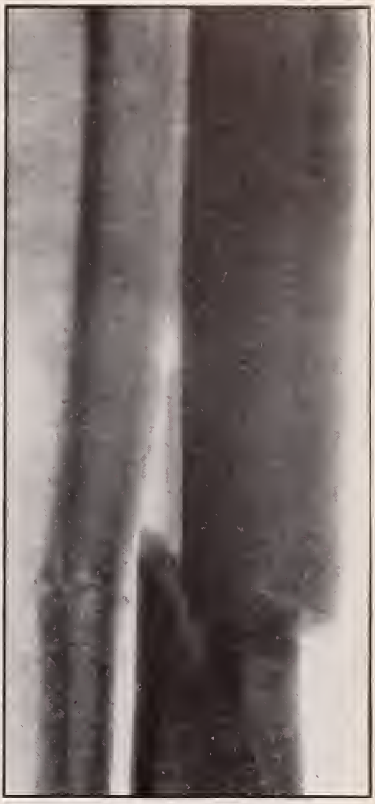
Before efforts to reduce



J. A. D.—Age 22—Fracture of fibula and tibia at junction of middle and lower third. Fair fixation and application of plaster of Paris cast.

RESULT: Union complete and function reasonably good.

After efforts to reduce



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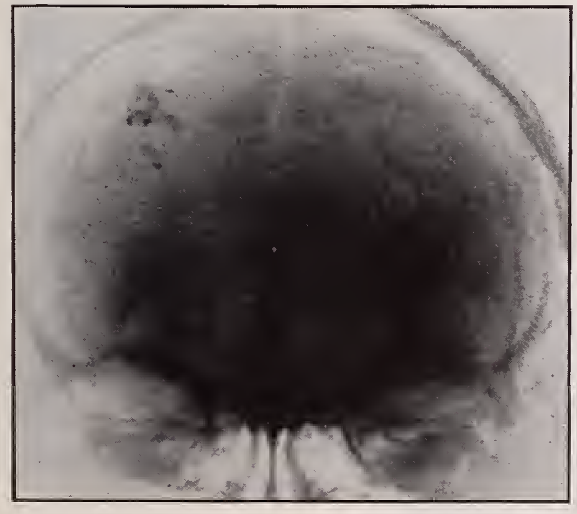

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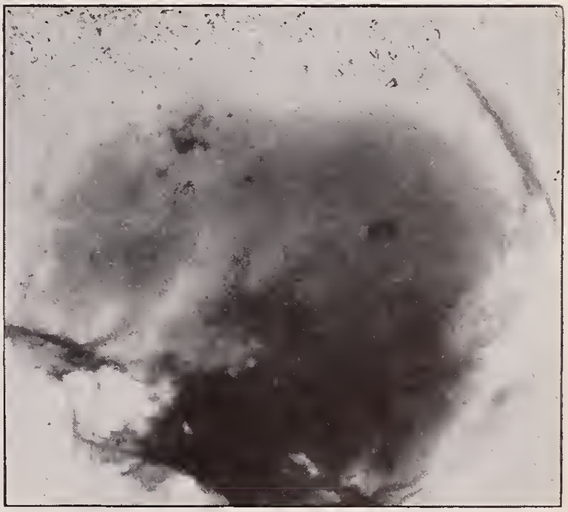
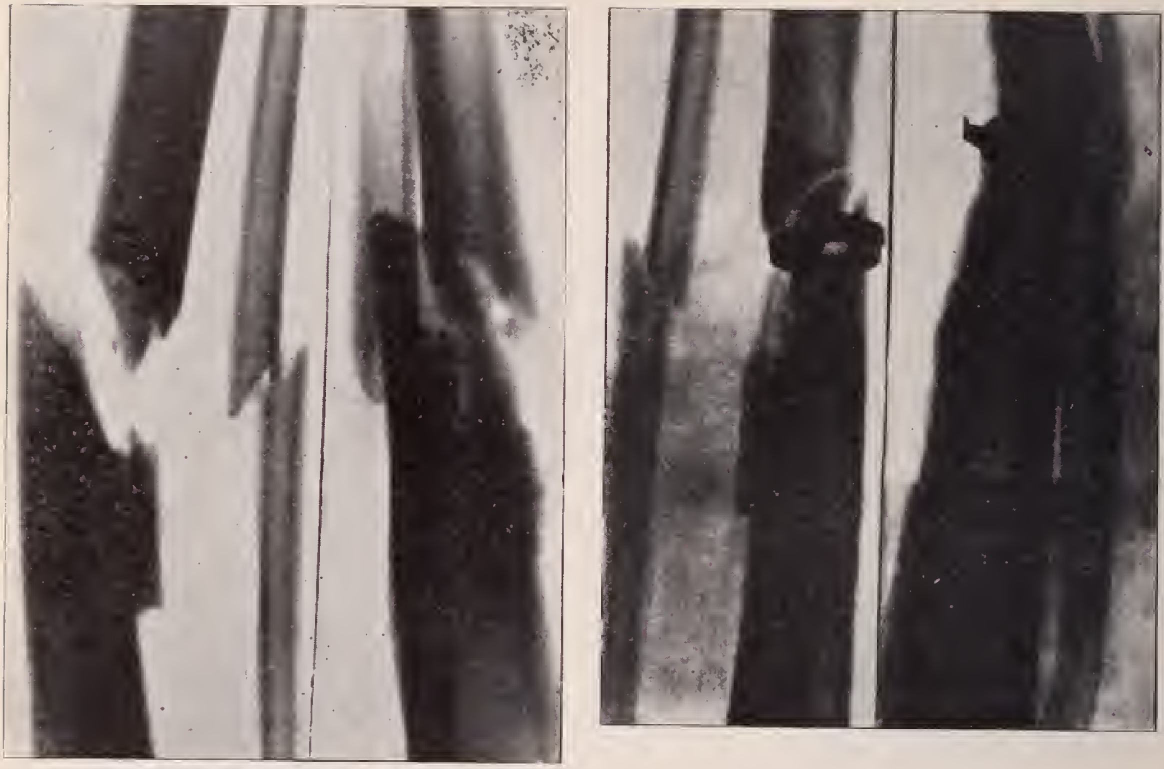


V. J.—Age 23—Gunshot wound of head. Bullet near center of brain.

RESULT: Patient seen one year later and no symptoms.



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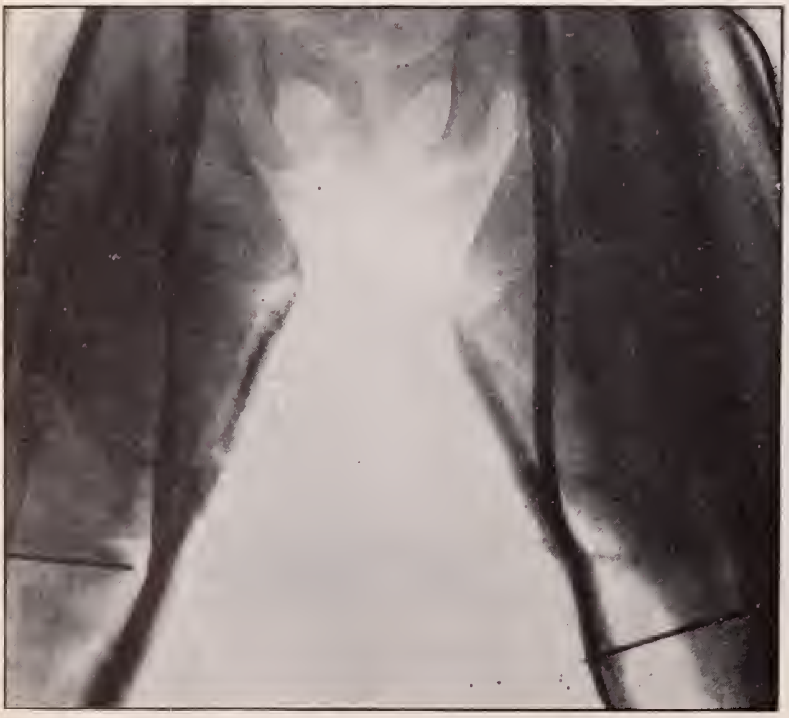
R. P.—Age 15—Compound, comminuted fracture right tibia and fibula middle third. Debridement of wound was done. Adjustment of fracture, Martin-Parham band placed around tibia. Plaster of Paris cast applied from knee down.

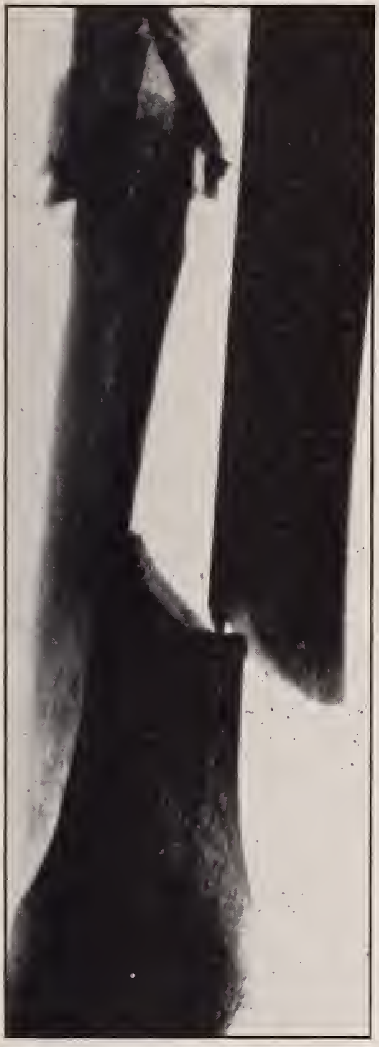
RESULT: Union complete. Function not perfect but improving.



J. R. R. — Age 6 — Fracture middle third of both femurs. No picture secured previous to attempt at reduction. Kirchner's wire inserted through lower end of each femur above condyle. By extension ends of bones were adjusted under fluoroscope. Spica plaster of Paris cast applied to hips and legs, large Kirchner's wire penetrating cast.

RESULT: Three months later patient walking. No deformity. Function good.

Before efforts to reduce



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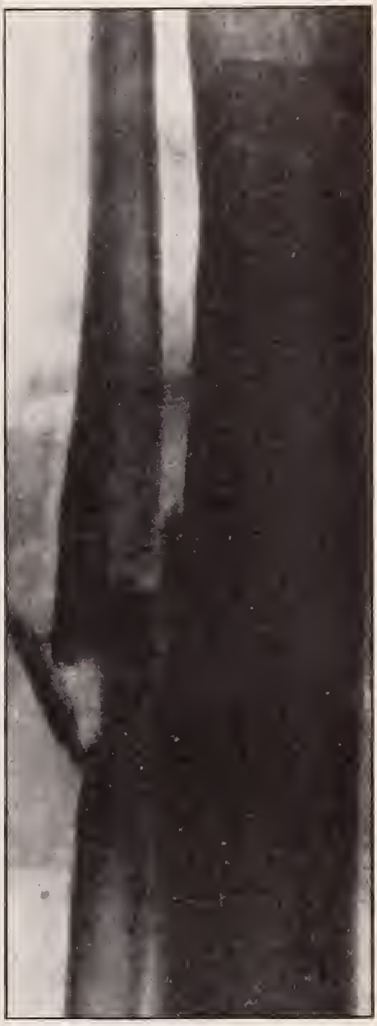

W. O. E.—Age 67—Fracture tibia and fibula lower third. Closed reduction, plaster of Paris cast applied.

RESULT: Union complete. Function good.

Congenital Rickets?[*][†]

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NEW ORLEANS, LA.

RICKETS, or a kindred disease, prevailed many centuries ago for, in the writings of Plato, Soranus, and Claudius Galenus, were mentioned and described bony manifestations that simulated somewhat our present day acceptation of this disease. Substantiation necessarily has not been forthcoming. The fundamentals of this entity, from an authoritative standpoint, date back to 1660, when Glisson and his collaborators—in the second edition of De Rachitide—gave the profession the first complete treatise of this deficiency disease which, today, is so commonplace. Though my title is "as old as the hills," much remains to be learned as to its causes and treatment for, despite our prophylactic measures, the incidence of rickets has not diminished. To the contrary, it has increased and our efforts to cure all cases have not, in some instances, been crowned with immediate success.

Infantile rickets and infantile tetany are inseparable—discussion of the one leads to the consideration of the other. Indeed, they are closely related, so much so that some authorities are prone to believe that they are one and the same disease. In this regard, it is interesting to know that only a small percentage of infants have tetany, though practically every child with tetany has rickets—roentgenologically or clinically, or both—and, finally, that tetany is a sequel of rickets. Both are expressions of inorganic salt deficiency, where normal calcium and phosphorus ratios, as well as amounts, have not been maintained; instances where diet, cod-liver oil, inorganic salts and sunshine in proper dosage and continued supervision might have obviated, or better diminished, the increasing incidence of this disease.

Congenital tetany is not acceptable to most of us, but what arguments can be offered to refute the case of an infant—spasmophilic—manifesting convulsions, with lowered calcium determination, with positive electrical reactions and definite neurological findings who, through the sole administration of calcium, is relieved at times almost instantaneously. It is generally agreed, nevertheless, that tetany is a disease of infancy, that its occurrence is now being demonstrated in younger children than previously reported. Guild (1936) analyzing 293 cases studied in Harriet Lane, found 68% occurred during the first year of life and records the third month—generally speaking—as the beginning period and notes that the peak of incidence is the second and third quarters of the first year.

Rothstein (1934) reports that Holt and Howland (1925), Morse (1926), Grulee and Bonar (1926), Lucas (1927), Hess (1929), are all in accord that tetany never occurs in the newborn. Holt, Jr., and McIntosh (1933) state that it may occur, but it is rare in the first three months. Among those who share the opinion that tetany does occur in the newborn are Kehrer (1913), Nassau (1921), Powers (1925), Griffith (1926), Shannon (1931), Bass and Karalitz (1931), McGavran (1932), and Maslow (1933). In the various cases reported thus far, there have been only three cases[*] which can be authentically diagnosed.

Cohen (1933) remarks, "There seems little doubt then from laboratory and clinical evidence that infantile tetany may be and often is a sequel of imperfect healing of rickets." Further on in his article he quotes Rosenstern (1910) as having demonstrated that almost all premature children have a hyperirritability of the nervous system to the galvanic current, indicating a latent tetany. Cohen says, "It seems to us that tetany of these children is a primary expression of rickets, and in no way related to any healing process." In his summary he concludes that "Tetany occurring in very young premature infants may be the primary expression of a low calcium form of rickets, and may not be suprarachitic, as in older infants."

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[*] New Orleans Day, Southern Medical Association Meeting, November 30, 1937.

[†] Finkelstein designates the newborn period from the time of birth to the day when all evidences of intrauterine existence have disappeared, averaging the first 14 days of life. |Von Reuss considers the newborn period to be 3 weeks.

[*] Shannon's third case; Bass and Karalitz first case; Maslow's third case.

Rothstein (1934) believes that tetany of the new-born is a syndrome which can and does occur, although its existence in the neonatal period has been fairly universally denied by most pediatricians.

Congenital rickets a generation ago was established and supposedly of frequent occurrence, but today, there are those who doubt the presence of rickets being present at birth. Hess, A. F., (1923) stated that, as far as he was aware, no substantiated case with histological findings had been reported. He mentioned that prematurely born infants are especially prone to become rachitic and even human milk is not an absolute protection against this. This statement admits the possibility of antenatal deficiency and acknowledges, at times, of the inability of breast milk—or better the inadequacy of the antirachitic factors of breast milk—to protect sufficiently or prevent a newborn infant from becoming rachitic. Is this due entirely to the fact that two-thirds of the minerals are taken on by the infant during the last few months of fetal life? Huenekens (1917), reviewing 70 cases of prematures and twins found that 92% of them developed rickets and 81% of 33 cases seen at or before four months of age showed evidence of rickets at that time. Wieland (1908-10-16), after an exhaustive perusal of the literature, concludes that no single definite case of congenital rickets has been reported. His opinion is shared by Griffith and Mitchell (1927), Tidy (1930), Hutchinson (1931), Garrod, Batten, Thursfield and Patterson (1929).

Schmorl (1909) studied pathologically 365 cases of rickets examined at autopsy and reported definite histologic signs of rickets in twenty infants under three months of age, four of which were two months old and the others between two and three months old. Ylppo (1920) mentions a premature infant, in which rickets was noted at the age of six weeks. Dunham (1923) reports the case of a thirty-four day old infant, allegedly born prematurely. Hess (1929) states that rickets begins about the third month and ends about the eighteenth month. Farrell and Burt (1932), reviewing histological and radiological studies of stillborn infants, doubt that the radiological cupping was due to rickets. They rather believe it was a normal variation in the zone of "preparatory calcification." Sandler (1933) reports a case of rickets in a five-week-old breast-fed infant.

Rector (1935) in a survey of 400 cases* of rickets seen in his clinic over a period of nine years, found that 32 cases, or 8%, were aged three months or younger—the youngest was a full-term infant of 35 days; 14 of the 32 cases were under 2 months of age and 18 were from 2 to 3 months. In his summary he says "that early post-natal rickets and florid rickets with multiple fractures may result from an insufficiency of stored skeletal calcium at the time of birth, incident to nutritional and metabolic defects on the part of the maternal organism."

In 1935 Maxwell and his collaborators reported the largest number of cases of foetal rickets which as yet has been brought to the attention of the medical profession. His observations were made in China. He tabulates 16 cases of fetal rickets and three additional cases that were somewhat doubtful. All of the infants and radiological evidences; in addition, five had section verification; eleven had cord calcium determination and five cord phosphorus determination. The three questionable cases had both roentgenographic and serological confirmation—the difference from the former being in the fact that all three were of the low calcium type of rickets, in contradiction to the usual infantile type, which is the low phosphorus rickets.

Unfortunately, limit of time precludes a more thorough discussion of Maxwell's findings, but nevertheless, he establishes definitely for the first time in medical history that congenital rickets actually exists and must be considered so in the future. He groups his cases into three categories: a. osteoporosis without any sign of fetal rickets; b. fetal rickets; c. early fetal rickets—the latter failing to reveal the disease through roentgenogram but exhibiting in sections a commencement of the disease. He rightly concludes that rickets is present more often than is generally believed and, to this, one has to be dependent in these early manifestations on the serological rather than on the radiological findings. He champions the belief that congenital rickets is more influenced by calcium starvation rather than avitaminosis. This is essentially my own belief for in 1930 and 1932 Bloom demonstrated both in rats* and in the human being that rickets could be prevented, and cured, by the addition of dicalcium phosphate without the aid of vitamin D. This was corroborated both serologically and radiologically. Maxwell (1935) inquires as to whether it would be possible to predict fetal rickets before birth, using the calcium and phosphorus serological test of the pregnant mother as the basis. This question cannot be answered with any degree of accuracy for we know that there is a decided difference between the serological findings of calcium and phosphorus of the pregnant mother, as compared to similar findings of the cord blood. It would be interesting, but impossible, to know for what length of time the increased inorganic constituents of the blood are transmitted to the fetus. While the amount may represent a product of calcium and phosphorus of 40 and above—the previous supply for the first seven months or more of gestation must, of necessity, in the fetus exhibit a decided deficiency of both of these elements. Is it possible, then, for the fetus in utero to receive in a short period of time an increased amount of calcium and phosphorus sufficient to balance the deficiency which has existed for so many months thereto? From my observations, rickets has been evidenced even in cases where the product was in excess of 40 but where there was a disparity in the normal ratio of blood calcium and phosphorus.

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*A case of early infantile rickets, with multiple fractures is reported.

What antenatal factors, therefore, could predispose or influence the presence of congenital rickets in the new born? Rector (1935) interestingly discusses this subject.

I.The maternal health and diet during gestation are of paramount importance.—In my previous contributions on rickets it was discussed, and charts were given, that the average diet of an American revealed a paucity of calcium, and similarly, of phosphorus. Frankly stated, the essayist did not think that the additional demands of the pregnant mother were adequately calculated and that, perhaps, too much was taken for granted relative to her diet, vitamins, inorganic salts, and sunshine. Animal experimentation confirms the importance of that which has been mentioned above.

II. Frequency of Pregnancy.—Frequency of pregnancy, of necessity, carries with it an element of risk as far as the infant is concerned. The work of Maxwell, et al, (1925) (1932), and Wilson (1929-30-31) stresses the relationship between osteomalacia and rickets and, in turn, the effects that the advent of pregnancy brings in the former disorder.

III. Effects of sunshine on mother and fetus.—The mother, during her period of pregnancy, must be subjected to daily ultraviolet irradiations, either to the actinic rays of the sun, or to artificial irradiation of an accepted sunlight apparatus. Hutchinson and Sha (1922) in India, after a complete survey, concluded that early rickets in the new born was influenced by a lack of sunshine.

PATHOLOGY

In rickets there is an overgrowth of the cartilaginous layer between the epiphysis and diaphysis both in width and thickness and it is markedly hyperemic. In this area the zone of proliferation is much enlarged and the cells are arranged irregularly instead of symmetrically, as in normal conditions. The deposition of lime salts and the amount of calcification is, nevertheless, much less than in normal conditions. The epiphyseal centers of ossification are larger, softer and more vascular than normal. There is a similar disturbance in the subperiosteal formation of the shaft. The outer layers are thickened but soft. The medulla of the bone is more hyperaemic than normal and the inner layers of the bone also become softened through lack of lime salts.

RADIOLOGICAL DIAGNOSIS

The diagnosis of rickets is based on the peculiar grooved line which corresponds to the anterior axillary fold and the distinct irregularity of the ribs in this region with a peculiar barrel-shaping of the entire chest as seen in the radiographs, which we believe is indicative of early rickets. This observation is made from numerous examinations over a period of years by Drs. E. C. Samuel and E. R. Bowie, radiologists of New Orleans.

The presentation of this paper has been prompted by unusual radiological manifestations of the ribs in ten cases diagnosed "congenital rickets." This finding was accidental and was incidental to the usual routine radiological examination of the newly born, which is done for the primary purpose of determining enlargements of the thymus. No definite conclusions are attempted, though it is the belief of the radiologist and myself that the bones of the skull and those of the chest are the ones that are most often affected and give expression to early radiological signs of rickets. This study warrants additional laboratory observations to be attempted in the future on each and every new born infant.

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*In conjunction with Food Research Laboratory, Inc., New York, 1930.

The following "New Born Routine" is suggested:

a. Physical examination; b. Radiological examinations of chest and wrist; c. Serological cord examination for calcium, phosphorus and lues. If possible, have at least one calcium and phosphorus serological determination made on the pregnant mother in co-operation with the obstetrician.

Unfortunately, no serological tests have been made in this series, but the evaluation of Chart No. 1 is interesting and enlightening: a. These children are all offspring of parents of the upper class of society; the mothers in the main part received some cod-liver oil, inadequate in amount; two were given calcium for a limited time, but no provision was made for sun baths and no definite diet was either calculated or written; 3. seven of the ten were born in the spring; two in the summer and one in the autumn. It would appear, therefore, probable, that the lack of sunshine might have been a factor predisposing to congenital rickets. 4. Two cases were three weeks and under, the youngest being two weeks; four under one month; six under two months; four two to four months. In this connection, the youngest child ed signs of tetany and warranted the radiological examination made on him. Some of the cases included in this series were not seen by me at the time of birth; in other cases the pictures were not made during hospitalization due, primarily, to financial inability.

CHART NO. I

Case Number	Date of Birth	Season	Age when Diagnosed	Which Pregnancy	Previous Pregnancy	Cod Liver Oil	Orange Juice	Calcium	Food
1	8-20-36	Summer	2 weeks	2nd	6 yrs. ago	—	—	—	Breast and Similac
2	10-24-36	Autumn	3 weeks	2nd	3 yrs. ago	—	—	—	Breast and Similac
3	5-17-36	Spring	1 month	2nd	2 yrs. ago	—	—	—	Breast and Similac
4	5-11-36	Spring	1 month	2nd	5 yrs. ago	—	—	—	Breast and Cow's Milk
5	4-8-37	Spring	6 weeks	2nd	4 yrs. ago	—	—	—	Breast and Similac
6	4-25-37	Spring	7 weeks	1st	—	—	—	—	Breast and Pet Milk
7	6-6-37	Summer	2 months	2nd	5 yrs. ago	Haliver with D 3 gtts 1 mo.	—	—	Breast and Pet Milk
8	4-22-36	Spring	2 months	2nd	5 yrs. ago	—	at 1 month	—	Breast and Cow's Milk
9	4-6-36	Spring	2½ months	2nd	?	2oz. —	at 1 month	—	Dryco and Lactogen
10	4-4-36	Spring	4 months	1st	—	Norwegian 2oz. - 1 mo	—	—	Brease and Lactogen

SUMMARY AND CONCLUSIONS

1. Is congenital rickets an accepted clinical entity?

2. Ten cases of congenital rickets, diagnosed radiologically, are reported.

3. Those who question the existence of congenital rickets admit that there are prenatal factors and that especially the diet of t pregnant mother plays an essential role in the development of rickets of the new born.

4. Doubt is expressed that this deficiency disease is as uncommon as was previously accepted.

5. A definite routine of the newly born must be followed: a. physical examination; b. radiological examination of chest and wrist; c. serological cord examinations for calcium, phosphorus and lues. If possible, have at least one calcium and phosphorus serological examination made on the pregnant mother in cooperation with the obstetrician.

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The Relation of Professional Detailing to Medicine

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THE DETAIL men met by the physicians today are steadily growing into two classes—those whose purposes are distinctly commercial and those whose sense of duty to their professions leads them to the practical and scientific. This division has forced upon the physiciansician such a variety of experiences that it strains the close relationship between detailing and medicine in some instances. This has now reached the point it cannot continue without frank recognition, and steps must be taken by both the professional detail man and the able physician to correct these experiences that tend to strain the fine relationship between scientific detailing and medicine.

Detailing as a profession is young. Like all of the other professions correlated with medicine it has and must continue to fight its way to recognition through many disheartening experiences. Here, as always, defeat is never met when one is inspired with the incentive to serve, once he sees the way discernedly through rational thinking and sound judgment. Along with its many and varied problems it creates other problems equally as complex for those whom it must serve. It needs the support and guidance of all who can give such help with understanding and vision. Thus it is with the scientific detail man today in respect to his relation to the medical profession as a whole. Like the inexperienced youth, detailing to a professional type has had to pave its own way and meet and solve its own problems. In its development, errors, blunders, and possibly harm may be done at times, very much like that experienced by medicine in the day of the "bleeding doctor" with his unwashed hands and other then-accepted practices which have long since been cast aside. However, these early experiences helped to point the way to the present high standards of medicine.

Only a comparatively short time ago the "detail man" was none other than the "medicine drummer" who relied on his repertoire of stories, fat cigars, and "hail fellow-well-met" attitude for success. From here his name began to change as further developments came. For a time he was called the "medicine agent" and was known for his high-pressure tactics and poor sales talks; a bit later, the "traveling medicine man" with his "set speeches" prepared for him by one with some knowledge of pharmacy and medicine; then, the "representative" whose introduction to medical subjects was confined to a short course or program limited to the products he must present to the medical profession. Unfortunately, we still have much of this type of detailing. Nevertheless, it was from this point of development that the first real step toward professional detailing was made. A few men who had the proper training, understanding, and vision began to look into the possibilities and duties of their position and proceeded to study their products along truly scientific and practical lines. We well realize how inadequately detailing was done only a few years ago and how weak much of it is today. True, this earlier type of representation is becoming less effective while the scientific or professional steadily grows more prominent. By what name or title detailing will be known once professional recognition is given, we can only conjecture because there are some who feel that the terms, "detailing" and "detail man" do not express the true nature of their work. Nevertheless, we are firm in our belief that the professional detail man will be known by a fitting name in keeping with his able and well-delivered service based on a broad understanding of the scientific background and practical application, and uses of his products.

The relationship between the physician and this detail man is steadily growing closer through his great ability and desire to serve the needs of medicine intelligently. No longer can detailing justify its existence on memorized speeches, even though they be correct from a scientific standpoint. It behooves every member in its ranks to have college training and at least the advantages of a well-earned degree from a recognized school of pharmacy. These are essential if he is to go far in his service. Each physician has his own particular choice of drugs. This means the range or number of different drugs grows as the number of physicians increases. Therefore, if the detail man expects to serve his many physicians well he must have a broad education in pharmacy, materia medica, chemistry, toxocology, etc. He must be familiar with pharmacology, therapeutics, and know prescription writing. A basic knowledge of physiology is essential and some knowledge of anatomy will equip him for a better service. He must be able to read and understand medical texts and scientific journals. When he is well prepared along these lines and supports his position with such personal attributes as moral integrity, honesty of purpose, and the will to follow duty, the natural development is professional detailing.

Success in detailing cannot be measured in terms of remuneration or volume of sales. He who thinks and works in such terms falls far short in his ability to serve and certainly deprives himself of one of life's most prized remunerations—personal satisfaction in a service well rendered. Of course, the economic demands of life must be met and remunerations must be in keeping with one's position. What physician could think in terms of a fee when entering a sick room or answering an emergency call? Such a thought is entirely out of keeping with the oath of his profession yet he must also meet the economic demands of life. So does every conscientious man in the detail field, who recognizes his duties to his profession, look at his work. Regardless of how often the cloak of "a commercial tradesman" is thrown around scientific detailing it will continue to have within its ranks those who think and live each day true to these policies born of ideals founded on mature and analytical thinking and have deeply imbedded within themselves the true spirit of the professional man—a love of service.

We, who willingly shoulder the responsibilities to further professional detailing, have much in common with the other professions allied to medicine. Interviews are not made with the selfish thought of what can be taken from the doctor's office in the way of sales nor is there a desire to assume the role of the instructor, presumptuous enough to make an attempt to tell the physicians how he should practice medicine. To the contrary, they are based on a desire to serve well, to impart accurate information pertaining to the subject being discussed such as will be both practical Some may view this with skepticism, others voice criticism, nevertheless, we hold that detailing based entirely upon selfish purposes or for financial gain is a failure before it begins. We fully realize to meet the exacting requirements of the profession we must study constantly, have the willingness and ability to meet facts as they are and to think in terms of service rather than of sales. No longer are salesmanship and clever personalities sole requirements for this important position. True, they are contributing factors and play an important part in successful detailing but are of little value unless the individual has training, ability, is inherently honest within himself, and true to his ideals and position.

Standards in the detail field are constantly being raised. The medical profession cannot be adequately served through representation schooled and drilled merely on a product. As we have said, the detail man's knowledge of pharmacy and understanding of the various problems of medicine must reach further than the products he is to present. We have no desire to discredit any worthy approach nor would we sponsor suspicion toward those who are honest in their endeavors. Yet, we do condemn any representative or manufacturer who continues to thwart the progress of professional detailing by the use of "high--pressure" tactics, by representation incapable of intelligent service, and by frequent calls, poorly timed. These men who have such limited instruction as to acquire only a smattering knowledge of their subject lack confidence because they cannot be certain of their statements and have not had the training that makes it possible for them to acquire this knowledge. Some unfortunate practices are just as trying to the professional detail man as they are to the able physician.

Far be it from us to attempt to say how frequently interviews should be made. There are a great many factors having direct influence on this point. However, in our opinions no call is justified unless made in and to the interest of the physician as a first consideration while subsequent calls are to be timed when they will be welcomed and valued by him. We have often said that the medical profession as a whole is the most considerate and patient body of men one can find. Many demands are made upon the physician and his responsibilities are such as require careful study and deliberate thinking. His time is limited, and yet, how often have we seen him using this limited time, patiently listening with consideration to the statements of a representative who has but little understanding of his product or its application, other than that which was drilled into him through a short course of study. Who, other than the doctor, with his patience and understanding would give his valuable time to such trying, such inconsiderate calls are an imposition on the medical profession and are an affront to professional detailing. Possibly, the greatest good that can come from such an interview is that the physician will take advantage of his opportunity to help the representative better realize the responsibilities of his position and his duties to detailing.

It is through these ill advised calls that the fine relationship which exists between medicine and scientific or professional detailing suffers most. It takes no imagination to understand why an occasional physician has made it an arbitrary rule not to see detail men. We respect his personal opinions and desires, yet we would always show him the respect of a call at his office. Should he see fit not to see us and make known his wishes in this regard, then we are justified in taking the same position he must take when an acquaintance calls another physician. Rather than feeling disgruntled or rebuked our feeling would be as kindly as before the call. Before making further solicitation directly through his secretary, we would take such steps that would assure us that our next approach would be well received. The detail man's hours, like the physician's, are limited. Much of his time is lost while waiting, which often means that the actual discussions must be curtailed. Therefore, he must be fortified with all the possible knowledge that will allow him to use the few moments to the best advantage. The subject must be presented in simple terms. It must deal with both the practical and scientific uses and application. He must be mindful of the doctor's time, respectful of his position, always able to answer him intelligently and with confidence. He must be ever alert to express a requested opinion, even though it be contrary to the one held by the physician. When such is necessary it must be supported by sound knowledge of the subject, based on an authoritative source. In other words, "yes men" have no place in the ranks of professional detailing. Every successful detail man has had the experience of many able and busy physicians thanking him for his call and his helpful discussion. Such experiences lend encouragement and strengthen the scientific detail man's confidence in his position. Credit must be given to the physician for these experiences because it was he who made it possible for the detail man to serve him well.

It would seem when viewed from the physician's standpoint that such frequent infringements on his time and patience such as repeated and poorly timed calls by men of limited education, whose background and understanding of the subjects are inadequate, and who have but little conception of his problems, is certainly a rebuff to the commercial type of detailing. These abuses by such representation are today's detailing's most complex and difficult problem. It recognizes that such hindrances must be actively purged from within its own ranks and willingly looks to medicine for encouragement and support. Who in medicine fails to see the good effects of this purge? The professional detail man is following with appreciation the trend of medicine to accept and welcome his service.

Detailing is fulfilling many duties to medicine. More and greater opportunities will come as it prepares itself for better service. Medicine will recognize the value and dependability of professional detailing more as it learns it can rely upon it to meet these greater responsibilities. That these demands may be met, it has within its ranks college men, scientifically trained and well able to understand the language of the physician; they are mindful of his problems and are well equipped to discuss many of them. This ever-growing group of workers are men of integrity, high morals and ideals, ever alert to duty. They are close observers and keen thinkers, always seeking a way to help those they serve. They face their work as a life's vocation, devoted to service, and live it in terms of compensation through accomplishments.

Careful observation has shown that medicine is fast learning that professional detailing has a service to render. Many of its members classify detail men not merely by the firms they represent, but also according to the ability of the individual. They are choosing the detail man through the same eyes that the sick select the physician, on the basis of education, ability, character, and the service rendered. May they become more exacting in their requirements. It is here the medical profession has one of its best opportunities to help professional detailing. It must be remembered these men in the field are busy. They are well paid and are therefore mindful of the value of time to themselves as well as to the busy physicians. They realize that the duties of professional detailing are many and know that their position must be graced by dignity of service. They are mindful of their position and recognize with respect the opinions and ideals of others. Such respect is imperative and is so lived by the detail men of this class. Many have shown that detailing when done by those who understand this subject and duties, and are considerate of the physician's position, medicine and detailing are brought to a closer and finer relationship.

This detail man of whom we have been

speaking does not seek the physician's favor through unethical practices. He willingly relies upon his ability to serve intelligently. He is firm in the conviction that the medical profession's first interest lies in those things which will be helpful to him in better understanding and meeting his daily problems, and that scientific information on matters pertaining to up-to-date medicine is the physician's first consideration. May the physicians who share these opinions and those who may not agree give more thought and attention to the selection of their detail men. May ability and character be the first requirements, and may they lend their support to those who are giving their best to serve them well. Once detailing attains its position as an allied profession then will medicine be free to exchange ideas, confidences, and give help on the basis of a fellow profession. It knows such acceptances and recognition must come through knowledge which establishes confidence and conveys conviction. It realizes no profession can endure where selfish purposes are a principle and appreciates the sooner that this is realized by thos ein the field by the manufacturer, and by the physicians, the sooner will professional detailing fulfill its duties to medicine.

Metrazol Treatment of Psychosis at the Mississippi State Hospital, Whitfield, Mississippi*

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METRAZOL (trade-mark brand of pentamethlyentetrazol) is comparatively new, and so the question is often asked, "Who was the discoverer, or inventor?" For both discovery and invention, if by invention one means the application of a discovery, went together to bring about ultimate success.

In 1935, Ladislaus Meduna, of Budapest, Hungary, gave a report on six months' research work with convulsive therapy. He first used intramuscular injections of camphor, but soon gave it up because of technical difficulties, and used intravenous injections of cardiazol, as metrazol is known in Europe—to produce spontaneous epileptic seizures in schizophrenic patients.

He was led to this research work from observation made by Nyiro and Jablonsky in the examination of epileptics in the Royal Hungarian and Mental and Nervous Institute in 1929. They found that only about one per cent of the pure epileptic cases recovered, while more than 16 per cent of such cases developed schizophrenia in the later course recovered. In 1930, G. Muller communicated two cases of schizophrenia in a catatonic condition. Both were cured by the appearance of classical epileptic seizures. Therefore, Meduna concluded that there exists a natural, biological antagonism between epilepsy and schizophrenia.

Meduna describes the dosage and the technic of injections, which is essentially identical with that being followed today. He also found that there is no fixed rule as to how many seizures must be produced in any one case in order to produce remission. One patient responds to four or five seizures with complete remission, while another requires eighteen or twenty. He concluded however, that if twenty epileptic seizures fail to produce remission, further treatment is useless.

It is interesting to note, also from this research, the percentage of remission as related to the length of illness. Quoting from Meduna's text (translated from the German), "In my first communication, I have reported on twenty-six cases. Of these twenty-six cases, ten have remitted, three are essentially improved, and thirteen remain unchanged. Since then, the number of cases treated in my division has increased to one hundred one (101) cases. Of these 101 patients, 41 have complete remissions. That means that with my procedure, the number of remissions of schizophrenics reached forty per cent.

"I expected a continual improvement of the stated forty per cent of remissions; because, in the beginning, I took in the treatment every patient, without choice—often such in whom the schizophrenic condition was of five or six years standing and improvement was not to be expected—a choice of newer cases should naturally improve these statistics."

Science owes a great deal to this research work, for at the time it was done, no curative procedure for schizophrenia was known, and the application of convulsive therapy with forty per cent remissions was a great achievement.

During the past five months, fifty patients have been treated with metrazol at the Mississippi State Hospital, Whitfield, Mississippi. All of these were women. This group included:

18 dementia praecox—Catatonic.
7 dementia praecox—Paranoid.
8 dementia praecox—Hebephrenic.
10 manic depressive—Depressed type.
1 manic depressive—Manic type.
4 involutional melancholia.
2 psychosis with chronic alcoholism.

METHOD OF TREATMENT—

Every patient is given complete physical, psychiatric and laboratory examinations. Any evidence of cardiovascular disease, kidney infection, or history of head trauma is a contraindication to metrazol injection. Two tablespoons full of sodium bicarbonate are given them twice daily, beginning at least five days prior to, and continued through the period of treatment. No sedatives are given while patient is receiving metrazol. Breakfast is withheld on treatment days.

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*Read before the Southern Psychiatric Association, Atlanta, Ga., October 10, 1938.

A 10% solution of metrazol is used. The initial dose is 5 c. c. and each subsequent dose is increased by ½ c. c. The largest amount used was 12 c. c. Injections are given twice a week. Metrazol is injected rapidly. Almost immediately after injection, the patient coughs, blinks the eyelids, and often utters a cry. From 8 to 40 seconds later, a violent tonic and then clonic convulsion develops which lasts from 40 seconds to one minute. The patient becomes cyanotic, frequently voids, the pupils are dilated, salivation is marked. In short, the patient presents a typical picture of an epileptic seizure. After convulsion, the patient lapses into a coma in which he remains from five to twenty minutes. Several of our patients had a period of extreme excitement, which lasted for about one-half hour. A clouded state of long or short duration follows. Usually about one hour after the injection, the patient returns to his pre-convulsive state.

When the dose is insufficient to produce a frank convulsion, a very undesirable reaction occurs. There is a marked pallor, dilatation of the pupils, tremors and twitchings. The patient is fearful, apprehensive, anxious, and excited. There is a fear of impending death as one patient expressed it. Subsequent treatments of a patient who experiences the above reaction, meets with a great deal of resistance. For this reason, we have made it a practice to increase each dose by ½ c. c.

Treatment is discontinued when a remission occurs. The number of seizures which produce a remission varies. Several of the maniac depressive, depressed type patients had a complete remission after only four convulsions. On the other hand, as many as 16 to 18 injections were given to other patients with only slight or no improvement. If twenty seizures produce no improvement, treatment is discontinued.

COMPLICATIONS—

In this series of cases treated, no serious complications occurred. Three women patients with every convulsion, suffered dislocation of the mandible. This was reduced later during the relaxation period. Minor injuries were sustained as a result of biting the lips and the tongue in cases where the mouth gag (small folded hand towel) was improperly placed, or where patient fought the nurses.

RESULTS—

Of the 50 cases treated, seven showed no improvement. These were all chronic cases in which the psychosis was of from four to sixteen years duration, except one, maniac depressive-depressed type, in which the mental illness was of only one year's duration. This case had a full series of 20 injections of metrazol, but she has shown absolutely no change or improvement.

Twenty-seven cases showed marked improvement. In this group patients were also more or less chronic, that is, the psychosis was from 1 to 4 years' standing. The singular exception in this group of cases was that of a dementia praecox, catatonic type, 29 years of age, and whose illness was of nine years duration. She was given 10 injections of metrazol and in spite of the chronicity of her illness, she had improved sufficiently to be discharged from the hospital. She has been on the outside four months and a recent communication from the family stated that she is adjusting herself to her former environment well, and that her condition is better now than it has been since the onset of her mental trouble. Three of the patients who were discharged from the hospital had relapses. They were returned to the hospital. Another course of metrazol was given each of these and remissions recurred.

Sixteen cases have recovered. The results in this group were most spectacular. Stuporous, mute, "frozen", catatonics were roused and shaken into normal states. Profoundly depressed, retarded manics became hap,py individuals, whose motor and mental processes were speeded up as if by magic. Restless, agitated and depressed involutional melancholias became quiet, composed, acquiring a new and wholesome outlook on life. These dramatic results are illustrated by the following three cases.

Case 1—Mrs. M. F., age 23, was admitted to the hospital on Jan. 4, 1937 in a profound catalepsy. There was a fracture of the left tibia resulting from an attempted suicide by jumping from a second story window. Patient was mute, negativistic. Any attempt to move her was met with the greatest resistance. She was untidy in her habits. Her muscles were tense. Cyanosis and swelling of the lower extremities were marked. Patient would remain standing in one corner of the ward for hours at a time. During her 15 months' stay in the hospital, patient was tube-fed. She became markedly emaciated. Her weight was only 60 pounds. She mutilated her body by gouging out flesh from her arms and legs. She had even bitten off the terminal phalanx of her right index finger. Metrazol was given with some reluctance because of the patient's marked debility and emaciation. The first injection was given March 23, 1938. After two injections of metrazol, patient asked for food and ate of her own accord. Her appetite became ravenous. She was given six more injections of metrazol, and she became cooperative and talked spontaneously for the first time in two years. She regained her insight and discussed her illness with the nurses and the attending physician. She had a complete remission. Her speech was spontaneous, relevant, and she discussed her distressing hallucinations and delusions, stating that they were all a figment of her imagination and a result of her mental disturbance. She was paroled on July 3, 1938 from the hospital to her family. Her weight, at this time, was 135 pounds.

Case II—M. G. R., age 49, was admitted to the hospital on January 4, 1937. This patient was a cultured and educated woman. She had been an efficient laboratory technician. Upon admission, she presented a classical picture of involutional melancholia, being apprehensive, fearful and anxious. Her agitation was most marked. She walked the floor continually wringing her hands, and crying, "Oh, my God, I am lost! Please end my misery. When are you going to kill me?" Her delusions were morbid and she accused herself of having committed the "unpardonable sin." Hydrotherapy and thelin proved of no avail. She became debilitated and emaciated. Because of her poor physical condition, metrazol was given with some hesitancy. Metrazol therapy was begun on May 9, 1938, and after three injections, the patient quieted down, her appetite returned, she gained weight, was pleasant and agreeable. After the eighth injection, she had returned to her normal self and was discharged from the hospital on June 13, 1938.

Case III—Mrs. L. F., 38 years old, was admitted to the hospital Jan. 6, 1938. Patient was profoundly depressed and markedly retarded. Her speech was hesitant, monosyllabic. She had many self-accusatory delusions, and her hallucinations were distressing. She had attempted suicide. The depression progressed to a stuporous state. Patient would lie perfectly motionless and mute. She refused to eat and had to be tube-fed. Her every want had to be administered to. The usual measures failed to rouse her from her profound depression. On June 20, 1938, she was given 4 c. c. of metrazol. A violent convulsion resulted. The following day there was no change in her mental condition. On June 23, 1938, 4.5 c. c. were injected, and this produced no change. On June 27, 5 c. c. were injected and on June 28 patient ate voluntarily, and asked for more food. She dressed herself and requested that she be sent to the beauty parlor. On July 1, 5.5 c. c. were injected and on July 2, patient was much more alert and keen, and tidy, dressing herself neatly and talking freely to the attendants. On July 5, 6 c. c. were injected. Patient had a marked reaction. The following day, she appeared to be her normal self. She was alert, happy, smiling; her speech was spontaneous and normal. She regained her insight and talked freely to her physician of the circumstances of her attempted suicide. When asked how she felt about this matter now, she replied, "No, I do not want to die—life holds too much for me." She was paroled to the care of her family on July 10, 1938, and still remains at home.

It is true that spontaneous remissions occur in most of the manic depressed group and even in the dementia praecox. Kraeplin states that 13% of the catatonic and 8% of the hebephrenic praecox have spontaneous remissions. However, from experience, it is noted that these remissions are not as rapid or complete as they are with the metrazol therapy. The following case illustrates this point:

Patient, M. H., age 40, manic depressive-type, had 3 commitments to this institution. During her first attack, she was confined to the hospital for nine months. Her second attack lasted 14 months and for this period she was confined to the hospital. At the onset of her third depressive episode, she was immediately returned to the hospital. After four injections of metrazol, she had made a complete recovery. Her stay on the third commitment was only one month.

Tabulated results of the individual cases are given in the following table:

CONCLUSIONS

1. A group of 50 women patients were treated with metrazol.

TREATMENT OF PSYCHOSIS BY METRAZOL

TABLE I.

No.	Name	Age	Duration of Illness	Diagnosis	Convulsions	Results
1	L. S.	27	2 Years	Hebephrenic	8	Recovered*
2	E. P.	25	2 Years	Dem. Prae. Par.	16	Improved*
3	M. M.	20	1 Year	Hebephrenic	12	Recovered*
4	M. T.	21	6 Mo.	Catatonic	6	Recovered*
5	L. F.	38	6 Mo.	Manic. Depr. Depr.	5	Recovered*
6	L. R.	29	9 Years	Catatonic	10	Improved*
7	P. M.	18	2 Years	Hebephrenic	10	Improved*
8	E. M.	23	2 Years	Hebephrenic	9	Improved*
9	G. F.	19	6 Mo.	Catatonic	12	Recovered*
10	O. H.	27	1 Year	Catatonic	9	Marked Improvement*
11	G. R.	50	2 Years	Inv. Mel.	6	Recovered*
12	M. R.	24	4 Years	Hebephrenic	18	No improvement
13	I. B.	28	3 Years	Catatonic	10	Improved—Relapsed
14	M. G.	40	1 Mo.	Manic. Depr. Depr.	4	Recovered*
15	J. H.	22	4 Mo.	Catatonic	10	Recovered*
16	G. W.	30	10 Mo.	Catatonic	8	Recovered*
17	E. R.	45	1 Year	Manic. Depr. Depr.	10	Marked improvement
18	W. W.	25	6 Mo.	Catatonic	10	Marked improvement*
19	J. K.	23	18 Mo.	Catatonic	10	Marked improvement
20	J. N.	32	4 Years	Chronic Alc.	18	No improvement*
21	M. F.	32	18 Mo.	Catatonic	10	Marked improvement
22	G. C.	58	13 Mo.	Inv. Mel.	8	Apparently recovered*
23	M. M.	55	3 Years	Manic. Depr. Depr.	7	Improved
24	E. M.	51	18 Mo.	Inv. Mel.	7	Recovered*
25	K. W.	36	3 Years	Inv. Mel.	8	Marked improvement
26	E. C.	49	4 Mo.	Catatonic	20	Improved
27	C. H.	26	2 Mo.	Manic. Depr. Depr.	9	Recovered*
28	E. G.	30	3 Years	Dem. Prae. Par.	10	Marked improvement*
29	A.C.	47	4 Years	Dem. Prae. Par.	16	No improvement
30	L. D.	32	1 Year	Catatonic	15	Improved*
31	C. H.	25	5 Years	Hebephrenic	12	No improvement
32	G. G.	26	5 Mo.	Hebephrenic	8	Improved*
33	L. K.	19	3 Years	Hebephrenic	7	Marked improvement*
34	I. M.	36	14 Mo.	Dem. Prae. Par.	4	Improved*
35	V. W.	29	1 Year	Dem. Prae. Par.	8	Improved*
36	N. W.	37	15 Mo.	Manic. Depr. Depr.	7	Improved
37	V. L.	33	2 Mo.	Manic. Depr. Depr	7	Marked improvement*
38	A. F.	37	3 Mo.	Catatonic	9	Recovered*
39	L. B.	15	1 Year	Manic. Depr. Depr.	20	No improvement
40	N. V.	37	18 Mo.	Manic. Depr. Manic.	6	Improved*

*This patient was paroled and continues to be on the outside.

TREATMENT OF PSYCHOSIS BY METRAZOL

TABLE I. (Continued)

No.	Name	Age	Duration of Illness	Diagnosis	Convulsions	Results
41	W. M.	43	6 Mo.	Catatonic	6	Marked improvement*
42	M. M.	22	2 Mo.	Catatonic	7	Apparently recovered*
43	L. E.	16	6 Years	Catatonic	14	Improved*
44	E. S.	25	6 Mo.	Catatonic	7	Apparently recovered*
45	L. H.	21	1 Year	Manic. Depr. Depr.	7	Improved
46	E. C.	38	1 Year	Dem. Prae. Cat.	7	Improved—Paroled*
47	C. H.	39	4 Years	Chronic Alc.	10	No improvement*
48	M. L.	29	3 Years	Dem. Prae. Par.	8	Improved*
49	M. E.	36	1 Mo.	Manic. Depr. Depr.	8	Recovered*
50	G. A.	49	16 Years	Dem. Prae. Par.	10	No improvement

2. Seven patients showed no improvement. Twenty patients made marked improvement. Sixteen patients made complete recovery.

3. Thirty-seven patients were paroled. Three of these had relapses and had to be returned. Remissions occurred upon resuming the metrazol treatment.

4. Although metrazol therapy appears to be drastic, in this series of 50 cases, there were no mortalities or serious complications, although 500 injections were given and 84 convulsions were produced. Only slight complications, as mentioned before, were subluxation of the mandible, and minor injuries to the lips and tongue.

5. The most spectacular results were noted in the (1) involutional melancholias and (2) dementia praecox, catatonic type, in which the psychosis was of short duration, six months to one year. One exception was a depressed manic whose psychosis was only of one year's duration but who showed no change even after receiving 20 injections of metrazol.

6. Cases in which psychoses were of over 4 years' duration, showed no improvement, with the exception of one case, that of a dementia praecox, catatonic, whose illness was of 9 years standing, and who had shown marked improvement with 10 injections of metrazol.

7. Sufficient time has not yet elapsed to draw any definite conclusions as to the permanency of the recoveries, but there is no question but that metrazol is today far the safest, most easily administered and successful drug in the treatment of psychoses.

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THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

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Published monthly at Booneville, Mississippi

Annual subscription $1.00

Entered as second-class matter, January 19, 1926, at the post-office at Booneville, Miss., under the Act of March 3, 1870.

We are very grateful to our advertisers, one and all. They make it possible for us to publish the journal. We think they have a vision for service as well as the profession. We work hand in hand for better service to the people. Everything else being equal, we ask you earnestly, to trade with the ones who advertise with us. Any doctor can do this much.

In the death of Dr. I. W. Cooper of Meridian, organized medicine in Mississippi lost one of its most active members. He served as president of the State Association many years ago and held other places of trust and importance for a number of years. He was a man of unusual native ability, an able organizer, and a successful practitioner.

In manner, he appeared rather stern, but Dr. Cooper possessed a more tender heart than a casual acquaintance would suspect. He was devoted to his family. He possessed a deep love for children, was loyal in friendship, and was always active in any cause he advocated. He was artful in entertainment as evidenced at the state meeting held in Meridian in 1937. No one act of courtesy could escape his drag net of entertainment.

Be nice to our exhibitors and be sure to thank Dr. Levy for his efficiency in this line of service. The exhibitors finance the association in a large measure. Dr. Levy does a world of work along this line for which he receives but little if any pay. He is a most important cog in the moving wheel of this great medical assembly, the Mid-South.

At our request, Mr. Nooner has given us a slant on the detail man's point of view. This paper is well written and the contents therein deserve your most serious consideration.

After all, the majority of people die of common every-day diseases and the most important one thing for the medical profession is to utilize what we already know to the best advantage of the people. The research man is indispensible, but the man who can apply the medical science already known is just as important. There is no one thing of small importance in the practice of medicine.

Mississippi now has ninety-two hospitals within its borders. It is well supplied. It has a percapita distribution of funds for the indigent sick. In a large part of the state the charity patient is allowed to go to the hospital of his choice. We are now witnessing further advancement that means better service for the people and more income to the doctor. This is the modern clinic. You will note in this issue of the journal, announcement of The Children's Clinic at Jackson. This has been opened by Dr. Harvey F. Garrison and his son. It is modern and up-to-date in every respect, a credit to Jackson or any city. The Garrisons are doing a lot in this state to advance this specialty, pediatrics. Dr. Hunter Scales and his son have spent money very liberally to equip an office that is modern in every detail for diagnostic purposes. These investments indicate faith in the future of the profession and a desire and a willingness to serve the public well.

The problem of malaria is still one of our greatest. We know the parasite that causes it, the mosquito that carries it from one human being to another, and we think we have specific drugs for its cure; but yet this disease is still costing us millions of dollars each year in human life, in medicine, and in doctors' bills. The conquering of malaria is still an outstanding challenge to the medical profession. It is a problem for every citizen in the United States and the national government. With a united effort it will take millions of dollars and years of time to conquer this devastating malady. It is time for the medical profession and the resources of the government to be concentrated on this job. It is not a problem to be left in the deep South alone. If this nation should go to war all of its resources would be needed. If it does not, the citizenship of the large cities that is turning the wheels of commerce, carrying on trade, teaching the youth, pleading the law, administering the government, and expounding the Gospel is being replenished from the rural communities and small towns and largely from the South where malaria is taking such a large toll. It is time for members of the medical profession to take their stand in the front lines of citizenship and to lead the combined forces against this devastating disease about which so much is known, but against which, comparatively speaking, so little has been done.

Much has been said and written about the possibility of socialized medicine being forced upon us. In fact, we have sensed it in the political atmosphere for many months. Coming events do frequently cast shadows before them. These shadows were, at first, long and not well defined. Many doctors seemed to feel that no change in the system of practice was imminent. They were slow to admit that there was reason or demand for any material change. Personally, we have been forced to see that proper and adequate medical care for the masses has not been available and that it is not possible for the medical profession to furnish this needed care for the money that can be expected from those who need this care. Such a large proportion of the people is absolutely indigent and utterly unable to pay for medical attention that it is beyond the ability of the medical profession to furnish this attention without compensation. Further, no humane government can afford to permit these to sicken, suffer and die without this attention. But the question, naturally arises—how can this attention be provided without political corruption entering into the question? No one seems to know, and probably, this will be found to be impossible. But the show-down has come. The President has put the question up to Congress and the public in concrete form. By that, we mean he has sent a message up that will demand action of some kind or other. The indictment recently returned in Washington, we think, was never expected or intended to hold. We think the purpose of this procedure was to force organized medicine to get into the arena in some positive and concrete way. At least it has had this effect. At the Oklahoma meeting a committee was appointed to consider the matter and to confer with the President and anyone he might delegate to represent him and the government. From press reports, this committee has been prompt to discharge the duties imposed upon it, and it appears, further, that it has agreed to accept most of the conditions and provisions suggested by a committee that has been investigating the situation during several months prior to the Oklahoma meeting.

No one, yet, knows just what form the bill or bills that will follow the President's message, will take. But it is quite certain that some legislation will be enacted. We think that it behooves us to be watchful and more compactly organized than ever before. We cannot afford to permit politicians and laymen to get control of our professional activities. Nothing must be allowed to come between the patient and his doctor—nothing must be permitted to rob the patient, even though he may be indigent, of his choice of the man who is to take charge of his life or that of the members of his family. Nothing must be permitted to make it possible to auction sick people off to the lowest bidder, so to speak. No mercenary or political influence must be permitted to enter into the relations between doctor and patient. If the doctors will stand firm all this can be accomplished. Medical service can only be rendered by doctors, so if the conditions offered are not reasonably satisfactory to the majority of the doctors in a community or state, there is no reason why these conditions should be accepted. The right of collective bargaining is accorded all groups of organized craftsmen. We certainly should be accorded rights that are accorded bricklayers and other groups of citizens.

Above all things, we think whatever should be undertaken should be under the administration of medical men. Different communities have different conditions to meet, hence local or community groups of medical men should be entrusted with the administration of any funds that may be provided by national, state or county governments. Possibly the county medical society should control, acting, of course, under some kind of general plan. Any funds provided should be guarded by rigid supervision and bond should be required of those who handle such funds. All details can and should be clearly worked out and as clearly stated so that no possibility of fraudulent expenditures of such funds might be made. Personally we have never opposed any plan that might have for its purpose the supplying of medical care to the indigent at public expense. We are willing to see this relief extended to the "'medically indigent" group also. But under NO circumstances are we willing to subscribe to or agree to any plan that will result in "regimentation" or that will deprive the patient from selecting his own physician. Nor will we ever agree that laymen or politicians shall control the actions of individual doctors. It must be left up to the doctor in charge of each individual patient to decide upon the treatment that is to be given each individual patient. Neither must a layman (or woman) have the right and authority to say when any citizen needs or shall have medical care. These are but a few of the many points that must be closely studied and demanded before organized medicine permits its rights to be usurped and the safety of the sick to be jeopardized.

Let us be wide awake and not forget that in unity there is strength and that "vigilance, is, indeed, the price of liberty," professional as well as civil. Again I say, let us be wide awake and on our toes.

G. S. B.

A fine program has been planned for the Mid-South by its able secretary, Dr. A. F. Cooper, and the program committee, headed by Dr. Conley H. Sanford. It covers the field of medicine and surgery with the ablest men of the profession in North America. Memphis is a great medical center. It has a fine medical atmosphere. The doctors are most clever. The city is delightful in every way. It is still activated by the culture of the Old South. It breathes the spirit of progress, the air vibrating with the hum of industry. The hotels offer as fine service as any in the world. The medical school lends its professional prestige. The hospitals rank with the best in the United States, and personal contact with the medical profession of the city is inspiring and helpful. The lectures will furnish you definite information that will be of tangible benefit, while the table discussions afford an opportunity for the exchange of ideas that is of mutual benefit. Mingling with your fellow Mid-Southman will sharpen your medical mind and warm your professional heart. The Mid-South is the leader of associations of this type. It has a definite field of service. Every doctor in the Mid-South should be very grateful for the service this association brings him. He should appreciate it by attending every lecture if possible.

The man who tries to reform the church from the outside usually does not make much progress although there may be faults that need to be corrected. The leaders of the American Medical Association seemed to think we had no people in need of medical care who were not receiving it, when as a matter of fact, we have thousands constituting a burden the medical profession is not able to carry. The The officials of this great medical association should spend one month a year out on Yellow Rabbit and down on Vinegar Bend seeing first-hand some of the things that are needed; especially should the teachers in our medical schools and the super-specialists on large hospital staffs have these privileges. We are not blind to the merits of all these men, however, and we are very grateful to them for their labors and achievements. Nor would we fail to encourage every doctor in this country to stand foursquare with and for the American Medical Association at this time, to think sincerely and honestly, and to act co-operatively.

The medical profession of the United States certainly has a record of services good as any on this earth. No profession in the world has been more progressive, none more unselfish than the doctors of our land. The relation between the doctor and the patient has been sacred. The personal confidence of the patient in his physician to guard his health and guide and help him through diseases has inspired the doctor to efforts that can not be bought with money. A government that would deliberately destroy this sacred trust would say to the little child, there is no Santa Claus and to the patriarchs of faith, there is no God.

The first quarterly meeting of the Northeast Mississippi Thirteen-County Medical Society will be held in Columbus, the home of the president, Dr. J. W. Lipscomb. Don't forget your district society. It will be good to be there. The Columbus doctors entertain lavishly and in good taste. Dr. A. L. Glaze of Birmingham will be the guest speaker. His specialty is skin diseases.

For every practitioner a trained nurse is a good slogan. People want to know the cause. To make a thorough examination the doctor needs to have equipment and needs to have rooms and a bed where he can make the patient comfortable. One of the most important items of equipment is a trained nurse.

The national government needs to help pay for medical care for the indigent sick, but the application thereof should be in the hands of the medical profession, and the hospital means we already have should be utilized first.

We deeply appreciate the professional cards of every one of our doctors who has been so kind as to cooperate with us in this manner.

All the papers read at the Mid-South are to be published in this journal. Don't fail to turn in your subscription.

The medical profession is no trade union. It cuts and fashions garments more valuable than mere domestic.

The Pontotoc Medical Society has for its president and secretary this year, Dr. J. H Windham and Dr. E. B. Burns. They make a splendid working pair. The Pontotoc Society is pushing along in fine order.

Dr. J. W. Lipscomb of Columbus is the new president of the Northeast Mississippi Thirteen-County Medical Society. He is president of the State Board of Health. Dr. A. J. Stacy remains as the very efficient and obliging secretary. The first quarterly meeting of the association will be held in Columbus on the second Tuesday in March.

NORTHEAST MISSISSIPPI THIRTEEN-COUNTY MEDICAL SOCIETY

Columbus, Miss.
January 20, 1939

Dear Doctor:

"We must all hang together or assuredly we will hang separately," said Benj. Franklin to John Hancock as he affixed his signature to the Declaration of Independence.

The independence of the medical profession is threatened—regimentation is abroad in the land—socialized medicine is just around the corner—I adjure you to join your medical society and let us stand for our liberty guaranteed by the Constitution.

None of us desires to go in and out before our fellowman with a hang-dog expression, taking orders from politicians, with a status but little above that of an ordinary slave—with initiative curtailed—happiness destroyed—usefulness weakened—creating in the hearts of each of us a miserable dissatisfaction.

Come to Columbus on the second Tuesday in March to a meeting of the Northeast Mississippi Thirteen-County Medical Society

If you have paid your dues, I congratulate you; if not, send $5.00 to Dr. A. J. Stacy, Tupelo, Mississippi, at once, as he has to make his report to secretary of State Medical Association, of which you automatically become a member when you pay your $5.00 local dues.

The doctors of Columbus extend to you a hearty welcome and we expect to have a good program.

"Let's all hang together or assuredly we all hang separately."

Cordially yours,

James W. Lipscomb, M. D.,

President of Northeast Miss.,
Medical Society.

OMISSION

The name of Dr. Charles Lebaron, Sr., born April 12, 1868, died December 11, 1938, of chronic nephritis, was omitted from the list of Mississippi physicians who died in 1938.

FOR SALE

A Spencer Microscope in first class condition. Price $80.00. Apply to Dr. C. D. Davis, Trebloc, Miss.

Medical Economics

The reaction of the public press to the indicting of the American Medical Association, its officers and permanent secretaries of the various councils by the grand jury in Washington is most unfavorable to the Government. This action has aroused tremendous resentment amongst the medical profession. The feeling that the profession has been treated most unfairly is not confined to its members. Judging from the editorials from the lay press it is obvious that there are many, many others in this country who feel that the indicting of these officials was an underhand act to prepare the way for socialized medicine. It is a distinct and direct effort to harm the medical profession and to weaken its stand against socialized medicine. As one of the columnists writes in a most unfair presentation on the subject, the American medical profession is now behind the eight ball. There is no question but that this is the motivating purpose of the indictment. As an example of the reaction of the legal profession the statement of a distinguished lawyer might be mentioned. He said that it is the first time that he ever knew or heard of an act which had to do with financial and business relations being called on to lash a noble profession and to bring about a social change which is unnecessary and undesirable.

On these editorial pages we are reprinting the comments of Boake Carter which appeared in a recent number of The New Orleans States. It is through the courtesy of this publication that we are permitted to reprint Mr. Carter's article. It expresses well the feelings that the great majority of the profession has in regard to the underhand measures that have been taken by a few enthusiastic, misguided Washington officials to chastise medicine. It should be read and re-read.

It is a remarkable commentary on our present day life that there should be held up to public scorn a profession such as that of medicine, which has always upheld the finest of traditions, which has labored day and night in the care of the sick, rich or poor, and which has alleviated sickness and death to such an extent that morbidity incidence and death rate have fallen to a degree which is astounding. In no other country in the world is there a comparable record of decreasing illness and diminishing death rate. That medicine should be punished and held up to public ridicule because it has been through the efforts of organized medicine that quacks have been kept in restraint, that hospitals have the efficiency they have and that medical service is as excellent as it is, is utterly ridiculous. It is almost entirely through the efforts of the American Medical Association, through its policing powers ,that medical ethics is where it is today, that quackery is on the decrease and that malpractice is practically non-existent. It should be to the glory of organized medicine that such an honest, clean profession exists. Benighted reformers in Washington have done their best to destroy the faith of the American people in their physicians and doctors.—New Orleans Medical & Surgical Journal.

The Indictment of the A. M. A.

As a loyal constituent body of the American human did we let the implication and the Medical Association we would be less than threat inherent in the finding of the District of Columbia grand jury pass into history without a word of comment.

The great daily newpapers have given the details, and also have voiced their opinions editorially. As far as the majority of them did express themselves, we are gratified in the evidence of their confidence in us. The issues are fairly met and however much we may deprecate the propaganda value of finding indictments to coerce acceptance of a method of medical practice, it is not our desire to enter into the details of this controversy at this time.

We may, however, emphasize our position. It is our deep concern that all schemes and plans shall be so devised that the quality of medical care shall not be sacrificed to the cheapness of the care, and the profession shall remain free of political supervision and control. The necessity of providing adequate and high quality medical care to the needy without resort to compulsory health insurance is our immediate problem, and we are on the road to its solution. We desire to work out our solutions gradually, nor does any stringent urgency exist in this state which needs compel haste and hurry.

We contend that we are not "**in trade,**" and our members who practice the art and science of medicine individually are not working **at a trade.** Were we for a moment to assume the contrary, then the corollary would confront us, and the practices and usages of trade unionism would be ready at hand for our use in striving for economic goals. Organized medicine has never contended that it was a trade union or a guild. Our primary concern is not our individual economic advantages, but that the people we are organized to serve shall receive a better quality and a higher grade of medical care.

A great record of achievement is ours: the lowest mortality and morbidity record anywhere, with hospitals and colleges maintaining standards which are the envy and the admiration of the world; a record of co-operation with the public health agencies that is reflected in the fine health statistics of our people. We can afford to go to court and abide the issue. We have clean hands.

Edt. Jan. Issue NEW YORK STATE JOURNAL OF MEDICINE.

Case of the Doctors—Socialized Medicine Danger Ahead

The mass-production mania has now engulfed the medical profession.

The Government has succeeded in obtaining indictments against the American Medical Association and 21 of the nation's leading physicians and surgeons as conspirators to violate the anti-trust laws and prevent "trade."

The "trade" is group medical practice performed a co-operative basis. The scene of the battle is the District of Columbia.

The group medicine disciples charge the A. M. A. with bringing pressure to bear on hospitals and the 120,000 out of the 140,000 doctors in the United States who are members, to prevent the operation of group medicine.

The medical profession reports that the Sherman anti-trust law cites restraint of "trade"; that the practice of medicine is not a "trade" but a "learned profession"; that anything which prevents the right of a patient to free choice of his own doctor is dangerous to public health.

There are many points to be remembered before taking up cudgels for either side. First, the Government is pushing the case and the administration has a mass-production public health scheme it desires to foist upon the public. The indictments, therefore serve as excellent Government propaganda, even should the Government lose the case in a court of law.

Further, if organized medicine is not permitted to lay down some code of ethics and rules, by which doctors must be guided in their conduct, and by which they may be disciplined for infraction, why does the same administration encourage the formation of labor unions, which establish rules by which workmen are disciplined when they break the rules?

There are various kinds of organizations which give group medical care in the United States. Their number totals well over 2000. Upon hundreds the A. M. A. has stamped its approval because they did not violate the fundamental right of a patient to pick his own doctor. But there are others which do not permit such free choice and which furthermore, require a third party to hire and sublet the physician's services. In obtaining the indictments the Government has made no effort to make this vital differentiation clear to the public.

It has long been a popular cry—fostered by rabble rousers and Government bureaucrats—that the poor cannot obtain adequate medical treatment because of too high fees and hospital prices; that doctors and hospitals are afraid to lower their scales for fear of being "cracked" by the A. M. A.

If all hours of free treatment by physicians to people who are too poor were recorded, the total would run into astounding figures. If one man had all the dollars that doctors have knocked off their fees in treating patients they well knew had little money to pay, that man would be a billionaire several times over.

Medicine is not a business. Nor could it be described as a trade. It is the profession of healing. It is the healing of the ills of the human body. Each body has its own peculiar idiosyncrasies. Since when has it been possible to hand out healing on a mass basis and expect proper results?

A peculiar sense of intimacy arises between doctor and patient, just as a sense of intimacy rises between lawyer and client. The patient who believes he is just another item of cattle to be jabbed with a needle by a man whose salary is being paid regardless of what sort of work he does—how good or bad he may be—is the one who revolts against the principle of "medicine-on-a-mass-production" basis.

To establish a system where mediocrity is its keynote is to toy with human life—toy with the health standards of the nation. In neither instance is that benefiting mankind. Offering a palliative and attempting no cure is not medicine. It is bureaucratic cruelty.

As a patient, I have been to my doctor many times. And many times he gave me neither medicine, pills, not cut out my gizzard. But it was worth the money—a small fee—to learn that I did not need medicine.

It is conceded that the A. M. A. is not perfect. This writer long ago contended that its control was too conservative for these modern days; warned that rigidity of control would some day flare back in its face. It must also be acknowledged that the A. M. A. has eased its codes considerably in the last five years. But in any case, it is the guardian body which sustains the high standards of healing used in the United States, and it is pitiable to see the power of the United States Government being used to undermine the confidence of laymen in the integrity and decency of their doctors.

To be sure there are crooked doctors. But are there not also crooked lawyers? If the Government desires to bedevil the A. M. A. as an organization restraining "trade," then let the Government also bedevil the American Bar Association for similar reasons.

This, of course, it would never do. There are too many lawyers working for the Government!—**The New Orleans States.**

News Letter From the State Hygienic Laboratory

(Foreword: In order to improve laboratory service to the physicians of Mississippi, a staff member of the State Hygienic Laboratory discusses here problems connected with intestinal parasitology. It is felt that by presenting these problems to physicians of the state, they will be able to help create improved public health laboratory service. H. C. Ricks, M. D., Director of State Hygienic Laboratory.)

Problems Encountered in Intestinal Parasitology In The State Hygienic Laboratory

The Department of Intestinal Parasitology of the State Hygienic Laboratory examines approximately 1200 fecal specimens a month. Occasionally, however, as many as 200 specimens have been examined in one day. This discussion will be limited to the technic used and the problems presented in an average day's work. Best methods of submitting specimens in order to obtain accurate and prompt diagnosis will be explained as well as reasons why certain specimens are reported unsatisfactory.

In order to establish the fact that a patient harbors intestinal parasites or is free of intestinal parasites we believe that at least three stool specimens should be examined from each individual not showing infection on two successive examinations. These stool specimens should be collected at intervals of several days. The quantity of feces necessary for an accurate examination of a given stool is one--fourth to one-half ounce. A one-half ounce ointment tin one-half full supplies sufficient material, but this type of container is not the most desirable. Many specimens are received in these containers, which, when opened, reveal such a minute amount of material that the laboratory workers feel an accurate diagnosis cannot be rendered. These specimens are reported unsatisfactory. This rule was arrived at after examination of many such specimens with negative results. At the other extreme, many specimens are received in such large quantities that actual explosions of the material have occurred due to gas formation. If the physician will explain to the patient the type of specimen desired (many ointment boxes are received containing urine) and mention a desirable container if one is not supplied by him, accurate diagnosis will be facilitated and these unsatisfactory specimens will become a rarity in the laboratory.

Every day a few specimens are received well wrapped with adhesive tape—so well wrapped, in fact, that many minutes are required to reach the actual container of the specimen. Strange as it may seem, the specimens are usually leaking, while containers without tape usually arrive in good condition. If each physician could visualize the difficulty of opening forty to eighty speicmens a day in ointment boxes, each wrapped over and over with adhesive tape, we feel that those who submit this type of specimen would discontinue this practice.

Specimens received wrapped in newspaper, in match boxes and other cardboard or paper containers are always discarded and reported unsatisfactory. They are damp or are grossly leaking and are a danger to the laboratory personnel. A second, properly submitted specimen is too easy to collect to warrant examination of this type of specimen.

Liquid specimens are frequently encountered. This type of specimen is not satisfactory for protozoan diagnosis. Trophozoites of the various protozoa would be found in such stools if it were possible to examine these specimens while warm. Since trophozoites disintegrate rapidly after the stool has cooled, there is little chance of our finding diagnosable forms in liquid specimens in this laboratory. It is an established fact that cysts, and not trophozoites are passed in formed stools and at this stage the parasites withstand cooling and age to a considerable degree. Therefore, we feel that any formed stool can be accurately diagnosed for protozoa if it is examined within 24 hours after voiding.

Physicians who have patients with a bloody diarrhea suggestive of amebic dysentery are advised to have this type of stool examined while warm for trophozoites of Endamoeba histolytica. If this is not possible, the State Hygienic Laboratory will be of little help in these cases until a formed or semi-formed stool can be produced for diagnosis. We feel that more harm may be done by a possible false negative report on an unsatisfactory specimen than by reporting this type of specimen as unsatisfactory and unexamined.

Our method of fecal examination is that developed in the Department of Tropical Medicine of Tulane University in 1937. This technique is a centrifugation floatation method which with satisfactory (i. e. formed or semi-formed) specimens gives excellent results for both helminth and protozoan diagnosis. It is not necessary for physicians to request a particular examination when parasites are suspected, for all specimens are examined for all intestinal parasites found in this section of the United States.

Specimens preserved in formalin are u satisfactory for accurate protozoan diagnosis The pathogenic and amebic cysts are destroyed by the preservation solution. The necessity for submitting different types of specimens dependent upon the type of parasite suspected is therefore eliminated. (Submit only formed or semi-formed fecal specimens in an undiluted state).

Every specimen examined for intestinal parasites in the State Hygienic Laboratory is checked by two technicians before it is reported and often several preparations are made from a single specimen before a diagnosis is rendered.

The binomial nomenclature used in reporting positive specimens is that adopted by the International Commission of Zoological Nomenclature for each parasite. This has brought about the following changes in our reports, Giardia intestinalis to Giardia lamblia, Iodamoeba williamsi to Iodamoeba buetschlii, Oxyuris vermicularis to Enterobius vermicularis, Trichuris trichiura to Trichocephalus trichiura, and Taenia nana to Hymenolepis nana.

Our practice of reporting non-pathogenic protozoa is followed because these parasites are an index of the hygienic surroundings and habits of the individuals involved, and the control of their further spread through a community may prevent a future spread and outbreak of serious enteric infections.

It is of interest to note that with the new technic used for diagnosis of internal parasites, the State Hygienic Laboratory is finding infections of the pathogenic helminth Strongyloides stercoralis scattered throughout the state, heretofore unreported.

It is hoped that in the near future, glass, screw-capped containers for fecal specimens can be supplied by the laboratory to the physicians and that when used with the above mentioned suggestions, or percentage of unsatisfactory reports can be lowered to a negligible number.

PAST PRESIDENTS OF THE MID-SOUTH POSTGRADUATE MEDICAL ASSEMBLY

The following is a list of the past-presidents of the Mid-South Post-Graduate Medical Assembly, who are living.

Dr. Lawrence W. Long, of Jackson, Miss., who succeeded to the presidency on the death of Dr. R. M. Adams of Ripley, is giving a banquet in honor of these men on Wednesday night, February 15. We congratulate him upon this generous act.

The get-together meeting should be both pleasant and profitable.

Dr. P. W. Lutterloh, Jonesboro, Ark.
Dr. L. H. McDaniel, Tyronza, Ark.
Dr. H. King Wade, Hot Springs, Ark.
Dr. C. M. Harwell, Oceola, Ark.
Dr. F. L. Husbands, Blytheville, Ark.
Dr. V. B. Philpot, Houston, Miss.
Dr. W. H. Anderson, Booneville, Miss.
Dr. John Darrington, Yazoo City, Miss.
Dr. P. W. Rowland, Oxford, Miss.
Dr. N. S. Walker, Dyersburg, Tenn.
Dr. C. R. Crutchfield, 706 Church St., Nashville, Tennessee.
Dr. F. J. Runyon, Clarksville, Tenn.
Dr. B. C. Arnold, Jackson, Tenn.
Dr. J. W. Barkesdale, Jackson, Miss.

In Memoriam

Robert Milton Adams, M.D.

President of the Mid-South Postgraduate Medical Assembly 1938

Born December 28, 1871
Died July 1, 1938

President of the Mid-South Postgraduate Medical Assembly

Dr. Lawrence W. Long, who succeeded to the presidency after the death of Dr. Adams, was born March 17, 1902, in Jackson, Mississippi, and was reared and educated on a plantation in Yazoo County, close to Satartia, Mississippi. He was graduated from the Millsaps Preparatory School in Jackson, Mississippi, in 1918, from Vanderbilt University with a degree of Bachelor of Arts in 1923, from the Medical Department of Vanderbilt University as honor student and member of the Alpha Omega Alpha, honorary medical fraternity, in 1927.

He served as interne in the Vanderbilt Hospital, 1927, completing a second year of interneship in New Orleans, La., at the Charity Hospital, 1928, following which he entered private practice in Jackson, Mississippi, and served on the Staff of the Charity Hospital, where he is now visiting surgeon. He is a member and past-president of the staff of the Mississippi Baptist Hospital, is secretary of the Central Medical Society (president in 1936). He inaugurated the one-day postgraduate meetings sponsored by the society the past two years. Beginning with the medical school faculty of Vanderbilt University and following with the University of Tennessee, Tulane University, and Baylor University faculties, outstanding programs have been presented. He was vice-president of the Mississippi State Medical Association in 1937, councilor for the fifth district in 1938, and is chairman of the surgical section this year. He is a member the Southern, the Mississippi State, the Mississippi Hospital Associations, a Fellow of the American College of Surgeons, a Senior Fellow of the Southeastern Surgical Congress, and a Fellow of the American Medical Association. He also is a member of the Country Club and was formerly a member of Country Club, a member of the Methodist Church, and the Masonic Order, and is active in civic affairs. He is a major in the medical corps of the Mississippi National Guard and in command of the Medical Department of the 155th Infantry Regiment of the Mississippi National Guard. Has attended the Army Medical School at Carlyle, Pennsylvania, where a citation for meritorious service received.

Dr. Long has always been interested in organized medicine and is a faithful attendant o fall its parts and meetings. Among the papers he has written are: "Safety Pin in the Duodenum: Case Report," in the Southern Medical Journal, Volume XXIV, Number 10, October, 1931; "Wilms Tumors," presented before the Surgical Section of the Southern Medical Association at the Oklahoma meeting, 1938, with four case reports, and a paper in this issue of The Mississippi Doctor on "The Modern Concept of the Present Day Treatment of Gas Gangrene," with case report. He honors in no small way his position as president of the Mid-South Postgraduate Medical Assembly.

President-elect

H. Fay H. Jones, M. D., F. A. C. S.
Little Rock, Arkansas

Dr. H. Fay H. Jones was born in Charleston, Arkansas, in 1897. He received his A. B. degree from Little Rock College and graduated in Medicine in 1918 from the Medical Department of the University of Arkansas. He is a member of the Phi Rho Sigma fraternity. For many years he served as lieutenant (j. g.) in the United States Medical Reserve Corps. He has done postgraduate work in Chicago, New York, London, Paris and Budapest. Dr. Jones is professor of urology in the Medical Department of the University of Arkansas and Chief of the Department of Urology at St. Vincent's Infirmary and the Baptist State Hospital; urologist, Missouri Pacific Hospital, Little Rock, and consulting urologist at the United States Veteran's Hospital No. 78 in North Little Rock. In 1932 he served as president of the Pulaski County Medical Society and in 1935 as president of the Southwestern Branch of the American Urological Association. He is a fellow of the American College of Surgeons and is governor from Arkansas from this body. He is a member of the American Urological Association, the American Board of Urology, the American Medical Association, the Southern Medical Association, the Arkansas State Medical Society, and holds membership in many other medical societies. He is President-elect of the Mid-South Post-Graduate Medical Assembly.

Dr. Jones has contributed many articles on varios urological subjects to both state and national publications.

Vice-president from Tennessee

DR. OTIS WHITLOW
Savannah, Tenn.

Dr. Whitlow is a successful practitioner whose experience covers more than thirty years of practice and progress in middle Tennessee. He is an able and personable doctor who has been a member of this association for many years.

Vice-president from Arkansas

DR. E. J. HORNER
Jonesboro, Arkansas.

Dr. Horner, vice-president from Arkansas, is most active in organized medicine and a great booster of the Mid-South Assembly. He was born near Yellville, Ark., Oct. 29, 1890. His education was obtained concomitantly through high school and the school of hard knocks. From the age of sixteen he taught and went to school alternately until he was admitted to the Medical Department at University of Arkansas, where he worked his way through and was graduated in 1918, by interning in Little Rock hospitals two years and serving two years as penitentiary physician.

He served six months as first lieutenant at the Army and Navy Hospital at Hot Springs, after which he settled in Jonesboro for general practice. In 1927 and 1928 he was city health officer and later, in 1935 and 1936, was part-time health officer for Craighead County. He is a member of his local, state, Northeast Arkansas Medical Society and the A. M. A. An active member of the staff of St. Bernard's Hospital, Jonesboro.

President of Tennessee State Association

DR. THOMAS R. BARRY
Knoxville, Tenn.

Dr. Barry was graduated in medicine from Vanderbilt University Medical School in 1915.

He served an internship in Bellevue Hospital, New York City, in 1915 and 1916.

He was prison physician at Sing Sing in 1916 and 1917 until war was declared.

In October, 1918, he was promoted to the rank of major and became regimental surgeon for the 307th Infantry in the Seventy-Seventh Division.

He was honorably discharged from the United States Army in 1919 and immediately began preparation for a career as a urologist.

He did work at Cornell University; at the New York Hospital, and at St. Luke's Hospital, New York City.

After completing this work he began the practice of urology in Knoxville in 1920 and has devoted himself to this specialty since.

He has been an active member of his local state medical societies. He has also been an active member of the following special societies: American College of Surgeons and the American Urological Society. He has also been certified by the American Board of Urology.

His personal qualities and his professional conduct merit for him the high esteem in which he is held by the profession of Tennessee as evidenced by his election to the high office he now holds.—TENNESSEE STATE MEDICAL JOURNAL.

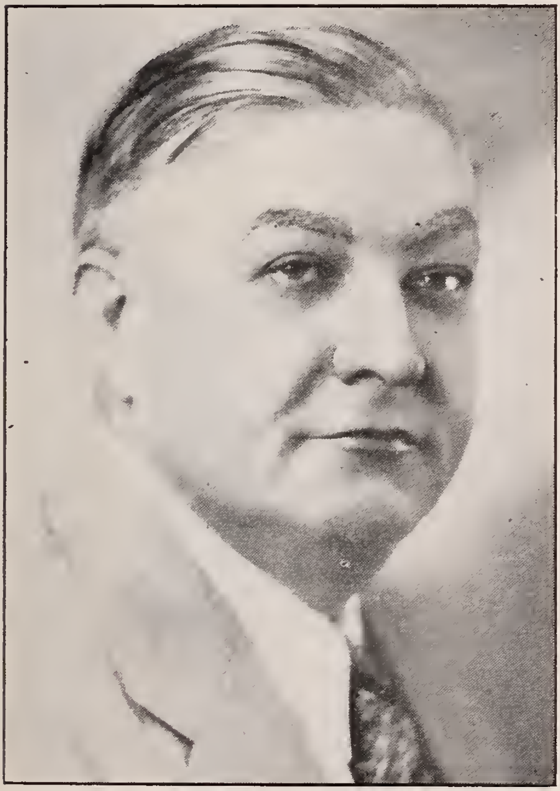
President of Arkansas State Association

DR. SIDNEY J. WOLFERMANN
Fort Smith, Ark.

Sidney J. Wolfermann, installed as the sixty-third president of the Arkansas Medical Society at the Texarkana meeting April 20, was born at Streator, Illinois, January 7, 1889 and attended the grade and high schools of that city. From the University of Chicago he received the degree of Bachelor of Science and his medical education was obtained at Northwestern University School of Medicine, from which institution he graduated in 1911. He served as assistant resident and resident physician, Saint Louis City Hospital, and as assistant to the chief dispensary physician of Saint Louis until he located at Fort Smith for practice October 1, 1913. During the World War he served as a first lieutenant in the regular army medical corps, attending the schools of oral and plastic surgery, orthopedic surgery and the army x-ray school after graduation from the Army Medical School, Washington, D. C. Upon return from army service he became one of the original partners in the Cooper Clinic of Fort Smith, where he remains associated. In organized medicine he has served the Sebastian County Medical Society as president and secretary and the tenth councilor district as councilor for nine years. On the council he was secretary for five years and for the last three years of his service he was chairman. A member of the clinical staffs of Saint Edwards Mercy and Sparks Memorial Hospital, Fort Smith, he has served on the executive staffs of both, and has been both chief of staff and president of the clinical society at Saint Edwards Mercy Hospital.

His civic interests are extensive, being a member and immediate past-president of the Fort Smith Rotary Club, a member of both the York and Scottish Rite Masonic bodies, the Grotto, the Shrine and the Elks Club of Ft. Smith.

President of Mississippi State Association



DR. JOSEPH E. GREEN
Laurel, Miss.

Dr. Green is striving for a three-fold program of achievement in the Mississippi State Medical Association. He is working for a state-wide pure-food and drug act, accuracy in vital statistics records, and the enactment of a law prohibiting indiscriminate sale of barbiturate acid compounds in the state.

This active president received his M. D. from Tulane University Medical School.

He has served both Green and Perry Counties as health officer, past president of the South Mississippi Medical Society, and served on the Council of the Mississippi State Medical Associaton from 1931 to 1937.

He is a member of the Baptist Church and has served as superintendent of the Sunday school, and as deacon. He is past-president of the Rotary Club in which he still holds membership. He is a member of the Laurel Chamber of Commerce; Past Grand Master of the Mississippi Masons. He has been very active in The Southern Pediatric Seminar in North Carolina, having attended seven sessions. He also took four months postgraduate course at Tulane in pediatrics and obstetrics.

In his practice Dr. Green has been giving special attention to pediatrics and obstetrics for a number of years. On these subjects he is keeping well informed. He has stood in the front ranks in organized medicine all along the way.

THE FOLLOWING essayists will address the fifty-fourth session of the Mid-South Postgraduate Medical Assembly. Make your plans to hear as many of these men as possible, not forgetting the luncheon hours.

Dr. Norris W. Vaux

Philadelphia, Pa.

Address: "Puerperal Sepsis." 10:00 a. m., Tuesday, February 14.

Obstetrician, gynecologist. Professor of obstetrics, Jefferson Medical College obstetrician and gynecologist-in-chief, Philadelphia Lying-in and Maternity Department of the Pennsylvania Hospital.

Dr. Dean M. Lierle

Iowa City, Iowa

Address: "The Cause of Hoarseness." 10:00 a. m. Tuesday, February 14.

Otolaryngologist; ed. Stanford U., 1914-16; U. fo Iowa, B. S. 1919, M. D. 1921, M. S. 1923; student, Boston U., 1921-22; U. of Pa., 1928; U. of Vienna, Austria, semester, 1929; Instr., Otolaryngology and Oral Surgery, U. of Iowa, 1923-26, Asst. Prof., 1926-28. Prof. and head of dept. since 1928 Mem. (F) Amer. Coll. of Surgeons; A. M. A.; Amer. Laryngol. Assn.; Amer. Acad. Ophthal. and Otolaryngol.; Amer. Laryngol., Rhinol, and Otolaryngol. Soc.; Amer. Otol. Soc.; Soc. for Research in Child Development; Ia. State and Johnson Co. Med. Socs.; Sigma Xi, Nu Sigma Nu, Sigma Alpha Epsilon. Sec. of Instruction, Amer. Acad. of Ophth. and Otolaryngol.

Dr. George Herrmann

Galveston, Texas

Address: "Present Day Treatment of the Commoner Disorders of the Heart." 2:00 p. m., Tuesday, February 14.

Surgeon. Univ. of Michigan, B. S. 1916, M. S. 1918, M. D. 1918, Ph. D. 1922. Member Pathology Staff, Univ. of Mich, 1916-1918; Research Worker Chemical Warfare Service, U. S. A. 1918; Medical House Officer, Peter Bent Brigham Hospital, Boston, 1918-1919; Assistant Resident Physician, Robert Abbott Barnes Hospital, St. Louis, 1919-1920; Resident Physician, 1920-1921; ass't in med.., Washington Univ. School of Medicine 1920-1921; instr. in internal med., Univ. of Michigan, 1921-1924; ass't prof. of internal med., 1924-1925; ass't prof. of med., Tulane Univ. 1925-1928; assoc. prof. of med. 1928-1931; dir. Cardiographic Laboratory, Charity Hospital, 1925-1931. He has been professor of clinical medicine, University of Texas, School of Medicine since 1931. Editor, AMERICAN JOURNAL OF SYPHILIS, 1929-1935; associate editor, JOUR. LAB. AND CLIN. MED. 1927; editorial committee, AMERICAN JOURNAL OF CLINICAL INVESTIGATION, July, 1934.

Dr. Herrmann's memberships are many. He is also a fellow of the Amer. Assoc. for Advancement of Science and of the Amer. Coll. of Physicians. His bibliography includes almost 150 titles.

His books are: "Methods in Medicine," "Clinical Casetaking," "Revision of Clinical Casetaking," "Synopsis of Diseases of the Heart and Arteries."

Dr. Arthur W. Allen

Boston, Mass.

Address: "The Acute Abdomen." 3:00 p. m. Tuesday, February 14.

Surgeon.B. A. Georgetown College, M. D. Johns Hopkins. Chief of East Surgical Service, Mass. Gen. Mosp., lecturer in surgery, Harvard Medical School since 1936. He is a member of the Amer. Surg. Ass'n International

Surg. Ass'n, Sou. Surg. Ass'n, New England Surg. Ass'n, Boston Surg. Soc. A. M. A.

Dr. Leon J. Menville

New Orleans, La.

Address: "Eradiation Therapy in Diseases of the Glands of Internal Secretion." 4:00 p. m. Tuesday, February 14.

Radiologist. B. A. from L. S. U., M. D. Maryland Med. Coll.. He is past-pres. of La. St. B. of Med. Ex.; vice-ch. of the Sec. of Rad. of the A. M. A.; com. mem. of Am. Con. of Rad.; sectional com. mem. of "Definition of Pan-Amer. Med. Asso.: pase vice-pres. and ch. of exe. com. of Radiological Society; Gold Medalist of the Radiological Soc. of North Amer. and La. Acad. of Sc., prof. of radiology, Tulane Univ. Sch. of Med. On ed. staff of the *American Journal of Cancer*. Is vice-president of the American College of Radiology.

Dr. M. C. Pincoffs

Baltimore, Md.

Address: "Hyperthyroidism Diagnosis and Certain Points in Treatment." 8:00 p. m. Tuesday, February 14.

Internal medicine. B.S. Univ. of Chicago, M.D. Johns Hopkins. Instructor in Medicine Johns Hopkins University 1919-1922, Professor of Medicine University of Maryland since 1922, Editor *Annals of Internal Medicine,* Regent American College of Physicians. Member Association of American Physicians, Amer. Clin. and Climatol., Amer. Med. Assoc., Southern Med. Assoc., The Johns Hopkins Med. Assoc., The Baltimore City Med. Soc., Ass'n. Amer. Physicians, vice-pres. Maryland Men. Hyg. Soc.

Dr. Fred W. Rankin

Lexington, Ky.

Address: "Modern Management of Surgical Lesions of the Colon." 9:00 p. m., Tuesday, February 14.

Surgeon. B. A. from Davidson College, Davidson, N. C., 1905; M. D from Univ. of Maryland, 1909; M. A. from St. John's College, Baltimore, 1915; Sc. D. from Davidson College, 1938.

Former professor of surgery, University of Louisville, Louisville, Ky., 1922-1931; former associate professor of surgery, Univ. of Minn. Medical School, Mayo Foundation; Surgeon to

Mayo Clinic. 1926-33; visiting surgeon, St. Joseph Hospital, Lexington, Ky., and Good Samaritan Hospital, Lexington, Kentucky.

Fellow: American College of Surgeons, American Surgical Assoication, Southern Surgical Association (past president), Western Surgical Association, Society of Clinical Surgery, Southern Medical Association, American Medical Association, Visiting Surgeons Club, Southeastern Surgical Congress (past president).

Author: "Carcinoma of the Colon," Chapters in Christopher's "A Carcinoma of the Rectum, Textbook of Surgery," "Surgery of the Colon" (Surgical Monographs), Malformations of the Colon" Lewis' Surgery, Co-author "The Colon, Rectum, and Anus," "Surgery of the Colon"—Sajous Medical Syclopedia, "Cancer of the Colon.". He is also author of numerous papers on operative surgery and surgical pathology.

Dr. Grady E. Clay

Atlanta, Ga.

Address: "Ophthalmoscopy, a Most Valuable Aid in Diagnostic Medicine." 9:00 a. m. Wednesday, February 15.

Ophthalmologist. B. S. Emory Univ., M. D. Univ. of Michigan, Interne Eye Dept. Univ. of Mich. 1913-16. Instructor of ophthalmology, Emory Univ. 1916-17, assoc. prof. Oph. since 1918. He is a member of his local and state medical societies, the A. M. A., the Academy of Ophthalmology and Otolaryngology, American Ophthalmological, and the American Board of Ophthalmology. He is associate editor of THE AMERICAN JOURNAL OF OPHTHALMOLOGY. He is a member of the board of trustees of Emory University. His special interest in ophthalmology is lesions of the fundus oculi.

Dr. Ralph M. Waters

Madison, Wis.

Address: "Derivatives of Opium and Hyoscyamus in Anesthetic Practice." 10:00 a. m. Wednesday, February 15.

Anesthetist. M. D Western Reserve Univ. Med. School. Was ass't prof. of surgery, Univ. of Wis., 1926-28, assoc. prof. of surg. 1928-33. Has been professor of anesthesia since 1933 at the University of Wisconsin Medical School. He is also director of anesthesia at the Wisconsin General Hospital, Madison, Wis.

Dr. Wm. P. Healy

New York, N. Y.

Address: "Carcinoma of the Cervix Uteri; Problems of Diagnosis, Treatment and General Management." 10:00 a. m. Wednesday, February 15.

Gynecologist. Received M. D. from Johns Hopkins Univ. 1900. Attending surgeon, Department of Gynecology, Memorial Hospital Staff; consulting gynecologist to Roosevelt Hosp., Misericordia Hosp., Fordham U., New York Infirmary for Women and Children, Bronx Maternity Hosp., Seaview Hosp., West New Brighton, S. I., Caledonian Hospitals, New York. He is a fellow in the A. M. A. and A. C. S. Member Amer. Gynecol. Soc., Amer.

College of Rad., Amer. Radium Soc., N. Y. Academy of Medicine.

Dr. E. B. Shaw

San Francisco, Cal.

Address: "The Evaluation of Methods for Immunization." 2:00 p. m., Wednesday, February 15.

Pediatrician. B. A., M. A., M. D., Univ. of California. Ass't Dept. of Pediatrics, Univ. of Cal. 1922-24, instructor 1924-28, ass't clin. prof. 1928-34. He is now associate clinical professor of pediatrics, University of California Medical School.

Dr. Roy R. Kracke

Atlanta, Ga.

Address: "The Leukopenic Diseases." 3:00 p. m. Wednesday, February 15.

Pathologist. B. S. Univ. of Ala., M. D. Rush Coll. Instr. bacterio. and path. Univ. of Ala., 1925, ass't prof. 1926-29, assoc. prof., 1930-34, prof. path. and bacter., Emory Univ., since 1934. He is a pathologist for Grady and Emory Univ. Hospitals, fellow A. M. A. Awarded Ward Burdick Medal, Amer. Soc. Path., 1934.

Dr. Henry B. Orton

Newark, N. J.

Address: "The Surgical Treatment of Malignant Diseases of the Pharynx and Larynx and Its Results." 4:00 p. m. Wednesday, February 15.

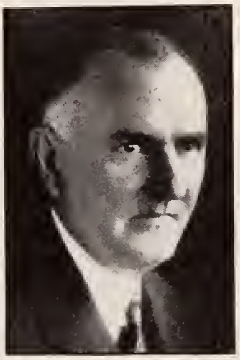
Otorhinolaryngologist. M. D. Jefferson Medical College. He is clinical professor of rhinolaryngology at the New York Polyclinic.

He holds many important affiliations with hospitals (St. Michael's, Essex Co. Isola., Newark City, Homeopathic, Morristown Memor., Irvington Gen. Monmouth Memor., St. Barnabas, Orange Memor., Mountainside, West Hudson, Newark Memor., Eliz. Gen., Fitkin Memor., Hackensack, and Essex Mountain Sanator.).

He is past-vice-pres. Amer. Lar. Rhino. and Oto. Soc., past-pres. Amer. Bron. Soc., past state ch. Jeff. Med. Coll. Alumni Ass'n, past-pres. Practitioners' Club, past-pres. New York Bronchoscopic Club. Dr. Orton's forebears were among America's first colonists.

Dr. E. G. Ballenger

Charleston, S. C.



Address: "Factors Which Hinder the Cure of Chronic or Recurrent Urinary Infections." 9:00 a. m., Thursday, February 16.

Urologist. Educated at Furman University, M. D. Univ. of N. C., three years Univ. of Maryland. Is urologist for Crawford Long Hospital, consulting physician Grady Memorial Hospital. Taught urology at Atlanta School of Med., also in Medical Dept. of Emory Univ. for 20 years. Is president of the American Urological Association, councilor for Georgia in Southern Medical Association.

Dr. H. C. Naffziger

San Francisco, Calif.

Address: "Sciatica and Low Back Pain, with Special Reference to Surgery of the Intervertebral Discs." 10:00 a. m. Thursday, February 16.

Neurological surgeon. B. S., M. S., M. D. Univ. of Cal. Since 1929 has been professor of surgery, Ch. of the Dept. of Surgery in Univ. of Cal. Med. School, and surg.-in-chief to the Univ. of Cal. Hosp. Consulting surgeon to the U. S. Veterans Bureau Facility, U. S. Army Letterman Gen. Hosp. and San Francisco Hosp.., past-pres. of the San Francisco County Med. Soc., Cal. Acad. of Med., and this year is president of the American College of Surgeons. He is a member of various societies.

Dr. John H. Musser

New Orleans, La.

Address: "Chronic Deficiency States with Special Reference to Subclinical Pellagra." 11:00 a. m. Thursday, February 16.

Internal medicine. B. S., M. D., Univ. of Pa. Was assoc. physician, Presby. Hosp., and physician at Philadelphia General and Howard Hospitals. He is professor of medicine at Tulane Univ., senior vis. physician at Charity Hospital. Is president of the Child Welfare and Public Health Ass'n of New Orleans, a fellow and past-president of Amer. Coll. of Physicians, and a member of several other associations. He edited vol. IV of PRACTICAL TREATMENT by Musser and Kelly, revised thirteenth and fourteenth editions of PRACTICE OF MEDICINE, by Anders; revised sixth edition of MEDICAL DIAGNOSIS, by Musser; edited INTERNAL MEDICINE, by Musser. He is editor of the *New Orleans Medical and Surgical Journal,* and on editorial staff of *Archives of Internal Medicine.*

Dr. Anthony Bassler

New York, N. Y.

Address: "The Pathologic Gall Bladder, What Causes it and What to Do With It." 2:00 p. m. Thursday, February 16.

Gastroenterologist. M. D. Bellevue Hospital Med. Coll. Lectr. ped., path. and inter. med., Bellevue Hosp., New York Univ. Med. Coll. 1900-10. Clin. prof. phy. diag., N. Y. Polyclinic 1911-14, prof. gastroent. 1915-29. Besides numerous hospital affiliations and professional membership, he is author of *Diseases of Stomach and Upper Alimentary Tract, Diseases of Intestines and Lower Alimentary Tract, Intestinal Toxemia, Biologically Considered, Colitis,* and over 200 monographs. He was editor of the first publication in the U. S. on gastroenterology.

Dr. Alton Ochsner

New Orleans, La.

Address: "Thromboplebitis." 3:00 p. m. Thursday, February 16.

Professor of surgery. B. A., D. Sc. Univ. of South Dak., M. D. Wash. Univ. Sch. of Med. Intern and Ass't Resident under Dr. George Dock, Barnes Hospital, St. Louis, Mo., 1920-1921.

Surg. Intern under Dr. A. J. Oschner, Augustana Hospital, Chicago, Ill., June, 1921 to Oct., 1922, University of Zurich, Switzerland, 1922-23, University of Frankfurt, Frankfurt-am-Mani, Germany, 1923-24, associated with Dr. D. A. Orth, also Instr. in Surg. and Surg. Path. at Northwesetrn University, Chicago, Ill., vis. surg., St. Mary's Hosp. and Columbus Hosp., 1925-26.

Ass't. prof.. of surg., Univ. of Wis. Med. School; ass't. vis. surg., state of Wis. Gen. Hos. Madison, Wis., 1926-27.

He is now professor of surgery and head of the Department of Surgery, Tulane University School of Medicine, New Orleans, La. Sen. Vis. Surg. and Dir. of Tulane Surgical Unit at Charity Hospital, New Orleans, La. Consult. Surg., Illinois Central Hospital, New Orleans, La., Consult. in Thoracic Surgery at the Eye, Ear, Nose and Throat Hospital, New Orleans, La. In addition to numerous memberships, he is also a member of editorial board: *International Surgical Digest; Archives of Surgery; Journal of Digestive Diseases and Nutrition; Surgery Gynecology, and Obstetrics*, co-editor of *Surgery*, secretary Southern Medical Association, regent, American College of Surgeons.

Author: "Diseases of the Intestine"; "Nelson's Loose-leaf Living Surgery"; "Diseases of the Veins, " Lewis' System of Surgery; "Diseases of the Thorax," Brennemann's "Pediatrics;" "Malignant Neoplasms of the Jejunum, Ileum, and Appendix," in book on "Treatment of Cancer and Allied Diseases."

Dr. Soma Weiss

Boston, Mass.

Address: "The Importance of Differentiation of Failure of the Peripheral Vascular System from Heart Failure." 4:00 p. m. Thursday, February 16.

Internal medicine. Educated at Royal Hungarian Univ. Budapest, Columbia Univ., N. Y., B. A. Cornell Univ., M. D. Associate professor of medicine, Harvard Medical School; director of the Second and Fourth Harvard Medical Services, Boston City Hospital. Member Amer. Acad. Arts and Sciences A. A. A. S., Amer. Heart Ass'n, A. M. A., Amer. Soc. Clin. Invest., Amer. Soc. Pharmacol., and Experimental Therapeutics, Ass'n. Amer. Phy., N. E. Heart Ass'n and Mass. Medical Society.

Dr. Julius H. Hess

Chicago, Ill.

Address: "The Premature Infant." 9:00 a. m. Friday, February 17.

Pediatrician: ed.; Northwestern U. Med. Sch., M. D. 1899; Instr. Ped. Northwestern U. Med. Sch., 1908-13. Asso. Prof. Ped. U. of Ill. Med. Sch. 1914-16. Prof. and Head of Dept. since 1916. Attending Pediatrician: Michael Reese Hosp., since 1906; Englewood Hosp. since 1902; Cook Co. Hosp., 1913 to date. Consulting Pediatrician: Municipal Tbc. Sanitarium, since 1926; Winfield Tbc. Sanitarium 1914-1926; St. Elizabeth Hosp. 1922-30. Mem.: A. M. A.; Ill. Med. Assn.; Chicago Med. So. (Pres. 1936-37) Amer. Ped. Soc.; Amer. Acad. of Ped.; Chicago Ped. Soc. (Past Pres.); Inst. of Med., Chicago (Past Gov.). Mem. State of Ill. Welfare Com.; Maj. U. S. M. C., 1918-19. Author: "Feeding and the Nutritional Disturbances of Infancy and Childhood" (F. A. Davis Co.) 1918, 1925, 1927. 1928, 1930; "Infant Feeding" (A. M. A.) 1923; "Premature and Congenitally Diseased Infants (Lea & Febiger) 1932. Co-Author: (with Mohn & Bartelme) "Physical and Mental Growth of Prematurely Born Children," 1934.

Dr. Ralph A. Kinsella

St. Louis, Mo.

Address: "The Frequency, Significance and Treatment of Familiar Functional Disorders." 10:00 a. m. Friday, February 17.

Physician; ed.: St. Louis U., A. B., 1906, A. M. 1910, M. D. 1911; Assist. Attending Physician, Presbyterian Hospital N. Y., 1917. Prof. Experimental Med., St. Louis U., 1919-21. Prof. Med., Washington U., 1921-24; Acting Dir. O. P. D., 1912-24; Acting Dir. Dept. Internal Med. 1922-24. Acting Chief of Staff, Barnes Hosp. 1922-24. Chief of Staff, University Hosp., St. Louis U., since 1924. Mem. Assoc. Amer. Physicians; Amer. Soc. for Clin. Investigations; Harvey Soc.; Soc. for Experimental Biol. and Med.; A. M. A.; St. Louis Med. Soc.; Mo. Assn. for Occupational Therapy (Past-pres.) F. A. C. P. Maj. M. C., U. S. A. 1917-19. Author of articles on streptococcal infections, arthritis, rheumatic fever, endocarditis.

Dr. Albert Snell

Rochester, Minn.

Address: "Complications and Sequelae of Obstructive Jaundice With Special Reference to the Hemorrhagic Diathesis." 10:00 a. m. Friday, February 17.

Internal medicine. St. Thomas College, St. Paul, 1912-14; B.S. in 1916, M.D. in 1918 and M.S. in 1927 from the University of Minnesota. During the World War was at the United States Naval Hospital, Great Lakes, Illinois, and medical officer on board the U. S. S. K. I. Luckenbach; was in charge of the clinical laboratories at the University Hospital at Minneapolis and did graduate work at the University of Minnesota from November, 1919 to April, 1920; and practiced at the Mankato (Minnesota) Clinic from 1920 to February 1, 19924. He entered the Mayo Clinic as first assistant in medicine February 1, 1924 and was appointed associate July 1, 1925. He is head of a section in medicine, The Mayo Clinic, and associate professor of medicine, The Mayo Foundation. He is a fellow of the American College of Physicians; is a lieutenant commander in the United States Naval Reserve Corps; and is a member of the American Gastro-Enterologic Association, the American Society for Clinical Investigation, the Association of American Physicians, and Sigma Xi.

Dr. M. Pierce Rucker
Richmond, Va.

Address: "Obstetrical Analgesia and Anesthesia." 2:00 p. m. Friday, February 17.

Obstetrics. M. A. Randolph-Macon College, M. D. Johns Hopkins, LL. D. Randolph-Macon College. Besides various memberships, Dr. Rucker is a fellow of American Gynecological Society, fellow and past-pres. American Assoc. Obstetricians, Gynecologists and Abdominal Surgeons, ex-chairman of Section on Obstetrics and Gynecology of the A. M. A., ex-chairman of Section on Obstetrics of Sou. Med. Ass'n. fellow of South Atlantic Ass'n, fellow and ex-pres. of Virginia Obstetrical and Gynecelogical Society. To Dr. Rucker goes the credit of discovering the action of adrenalin on the human uterus, also of demonstrating graphically the action of pituitrin on the human uterus.

Dr. F. A. Coller
Ann Arbor, Mich.

Address: "Peritonitis." 3:00 p. m., Friday, February 17.

Surgeon. S. D. State Coll., B. S. 1906; M. S. 1908; Ph.G. 1909; Harvard Med. Sch., M. D. 1912; Surg. Interne, Mass. Gen. Hosp., Boston, 1912-13, Resident Surgeon, 1913-15. Asst. Prof. U. of Mich., 1920-24, Assoc. Prof., 1924-28; Prof. since 1928. Dir. Dept. Surg. since 1930. Mem.: (F) A. M. A; Amer. Surg. Assn., Soc. of Clinic Curg., Societe Internationale de Chirurgie, So. Sur. Assn., Am. Assn. for Study of Goiter, Mich. State and Washtenaw Co. Med. Socs., Detroit Acad. of Surg. F. A. C. Resident Surgeon, Harvard Unit, Ambulance Hosp., Paris, 1915. In R. A. M. C. with B. E. F., Hosp. No. 22, 1915, Paignton, Devon, England, 1916. Lt. Col., M. C., U. S. A. Contributor of many articles to medical journals.

He is professor of surgery at the University of Michigan.

MEDICAL CARE FOR CLIENT OF FARM SECURITY ADMINISTRATION IN MISSISSIPPI

During the past several months I have had a number of communications from various counties over the state asking information on the above subject. For the general information of the profession, I want to reiterate through these columns statements that I have made personally to a number of medical men over the state.

During the time Dr. Garrison was President, he called a special meeting of the council in Jackson to consider this subject and after quite a discussion, the council went on record stating that it was opposed to state medicine or any other kind of medicine that would break the relationship of family doctor-patient. In event that conditions should arise in some county where the members of organized medicine felt that the group being helped by the Farm Security Program needed better medical care, then it would be left to the members of the organized medical society in that county to work out the program.

This resolution was also unanimously adopted by the house of delegates at its following meeting.

As president of the Association, I am standing strictly on principles laid down by the council and adopted by the house of delegates, and if anything should arise in your county contradicting what I have said, I hope the doctors will use this article to confirm the stand the officers of the State Medical Association have taken. You are at liberty to say further that any statement made by any party to the contrary is absolutely false and without foundation.

Yours sincerely,
Joseph E. Green, President.

MISSISSIPPI STATE MEDICAL ASSOCIATION and COMPONENT SOCIETIES

The Treatment of Poliomyelitis*

TROY BAGWELL, M.D., F.A.C.S.
KNOXVILLE, TENN.

The first systematic study of a large group of cases, which finally established poliomelitis as a clinical entity was published by Jacob Von Heine in 1840, in Kolmar, Germany, and was recognized as an epidemic disease in 1870.

It is unfortunate that the term "infantile paralysis" has come into such common usage and has such popular appeal. While it is true that the disease most often affects children between the ages of one and six years, cases do occur in adults and may go unrecognized until the paralysis ensues.

Anterior poliomyelitis is an acute infectious disease which varies from the usual acute infection such as scarlet fever, pneumonia, etc., in that in a majority of cases the convalescent stage lasts from six months to two years, a fact that is hard for general practitioners to grasp. The mortality in certain epidemics varies from fifteen to twenty-five per cent and leaves a residual paralysis in from twenty-five to seventy-five per cent of cases. Even with all of our studies in epidemiology and immunology in preventive medicine, poliomyelitis continues to take its toll of victims with the same regularity as when first described. These patients with parlyzed, deformed limbs, twisted bodies, and facing a future of helplessness, are those of whom I would speak, since, with intelligent management by the general practitioner, who sees them long before the orthopedic surgeon, many of these deformities can be prevented, and once the deformities have occurred, patience plus orthopedic surgery and vocational training can correct a large number of deformities to the extent that the stricken individual may resume a useful place in society and not be a burden to the family and an economic liability for life. The controversy concerning the etiology of poliomyelitis is well summed up by Paul H. Harmon (1) who says in part, "While conclusive evidence in favor of a filterable virus as the etiologic agent of poliomyelitis has not been produced to the satisfaction of all, the data are overwhelmingly in favor of this assumption. Recent investigation has failed to support the views of Flexner, Noguchi, and Amoss that globoid bodies, peculiar minute microorganisms, represent the active agent. The proponents of the streptococcus etiology of the disease have not been able to marshal significant additional evidence to support their claims. On the other hand, in animal experimentation with the virus, the disease has been reproduced so easily and regularly that rare doubt is cast on the irregular and questionable results obtained with the other agents" Therefore, I may make the statement that poliomyelitis is caused by an ultra-microscopic filterable virus which is highly neurotrophic. The virus invades the human body through the olfactory nerve as has been clearly shown by the work of Schultz and Gebbhardt, Brodie and Elvidge, and Lennette and Hudson. After gaining entry, the incubation period is from five to fourteen days, at which time the acute stage begins. Many times the initial symptoms of the disease are so mild that they may go unrecognized unless the patient is seen during an epidemic. The usual clinical course begins with fever, intense headaches, and marked gastrointestinal symptoms such as vomiting, constipation and abdominal distress. Although these symptoms are to be found at the onset of many diseases, poliomyelitis must be kept in mind until definitely ruled out. This is known as the systemic phase of the acute stage which soon blends into meningitic phase, manifested by hyperactive reflexes, muscular twitchings, or by convulsions. Stiffness of the back and neck is usually present and is an available diagnostic sign. The spinal fluid is clear with a marked increase in cells, mostly mononuclears. There is an increase in the globulin and albumin content. This meningitic phase blends into the paralytic phase which comes on usually the second day and seldom after the eighth day. The reflexes become hypoactive or absent and a flaccid paralysis ensues varying from one muscle group to those of both upper and lower extremities. Pain and tenderness develop in the affected muscles and is a most characteristic symptom, the average duration of which is six weeks. Too much cannot be said for the early diagnosis of poliomyelitis as a means of preventing deformities for if this is done, rational treatment may prevent paralysis, or, if it occurs, intelligent therapy may prevent deformities by splinting, etc.

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*Read before the Section on Hygiene and Public Health at the Seventy-first Annual Session of the Mississippi State Medical Association, Jackson, April 19, 1938.

The second or convalescent stage of poliomyelitis begins when the muscle tenderness has subsided and there is a progressive increase of muscle power. The improvement in muscle strength may continue for a period of two years, when all of the acute symptoms will have long since disappeared.

In the residual stage the paralytic symptoms and signs are now stationary or very slowly regressive. In this stage deformities may have begun to appear or already may be fully developed.

The clinical course of poliomyelitis may be correlated with the pathology present in the anterior horn cells of the gray matter of the spinal cord.

1. An area of edema with perivascular round cell infiltration.
2. The presence of petechial hemorrhages in addition to edema and perivascular infiltration.
3. Complete destruction of the anterior horn cells with nuclear fragmentation and picknosis along with petechial hemorrhages, edema, and perivascular round cell infiltration.

If the pathologic condition is of the edematous type, the muscles innervated by these nerves will recover their function as soon as the edema subsides performing all the physiologic process assigned to them by nature. This usually occurs within two or three weeks.

When the pathologic changes consist of petechial hemorrhages, in addition to edema, recovery of the muscles is markedly delayed.

When the pathologic changes consist of cell destruction, hemorrhages, and edema, muscle function recovery may take months or years or may not occur at all.

PREVENTION

Much work has been done on the preventive side of poliomyelitis. Kolmer[2] believes that it is worth while to attempt vaccination against the disease, but J. P. Leake[3] cites twelve cases of patients who contracted polio following injections of the treated virus to establish immunity against the natural disease. Of the twelve cases reported to the United States Public Health Service, death occurred in seven cases three days after the appearance of the paralysis. The editors of the 1936 year book of GENERAL MEDICINE make the comment that, "Such evidence certainly renders further trial of such living virus unjustifiable."

The chemoprophylaxis of poliomyelitis has also been given through consideration. Charles Armstrong[4] reported the use of picric acid-alum spray in the epidemic in Alabama in 1936. He concluded, after observing 270,000 sprayed and 160,000 not sprayed, that, "The actual incidence of polio in the group sprayed was somewhat less than the calculated evidence based upon the ratio in the unsprayed control group (16:217).

"It seems probable that the most effective method of application as well as the most ideal solution has not been found yet. Investigative work should therefore be continued."

F. F. Tisdall and Alan Brown et al[5] observed a group of 4,713 children between the ages of three and ten years during an epidemic in Toronto, Canada, which occurred in August, September, and October, 1937. They concluded that, "This study furnishes no evidence of the protective value of a nasal spray—it cannot be considered a practical public health procedure."

MANAGEMENT OF ACUTE STAGES

Harmon[1] concludes that, "Notwithstanding the total failure of statistical presentations to favor certain types of serums, clinical observations have been almost universally made of rapid symptomatic response to the administration of serum by the immediate drop in temperature and marked improvement in symptoms which cannot be totally disregarded. All other forms of therapy in this disease have been a signal failure, with the possible exception of spinal drainage. More data are needed before it can be said conclusively that serum of any of the four types commonly used are entirely without value. There appears to be enough evidence from clinical observation to warrant the continued use of serums in the early stages of acute poliomyelitis."

Pomeroy[6], reporting on the 1934 epidemic in Los Angeles County, states that patients were given 50 to 100 c.c. of convalescent serum for several days with complete recovery of all preparalytics; fifty per cent recovery of one hundred cases treated on the first day of paralysis; forty-one per cent recovery of those treated on the second day of paralysis; and twenty-seven per cent recovery of untreated cases.

I might say just a word concerning the use of the Drinker respirator, a kind of orthopedic appliance which is occasionally necessary in the acute stage. Its use is well summed up by Emil Smith[7] who states, "The most important indication for placing a patient in the respirator is a diminished vital capacity, which can easily be determined by the counting test, and as soon as this indication becomes apparent there is nothing to be gained by waiting for a fully established picture of respiratory muscle paralysis." The effect of the respirator in cases of respiratory muscle paralysis is an immediate and miraculous improvement but the prognosis should be withheld for at least five days in spite of the apparent improvement. The ability to breathe freely and without effort is not an indication for removing a patient from the respirator. The only indication is the ability to cough. Patients removed from the respirator without being able to cough may later develop atelectasis with bronchopneumonia.

The problem of the treatment of the convalescent stage of anterior poliomyelitis is definite, specific, and undisputed. It is ultimately to restore the maximum efficiency to the affected muscle. There is nothing in surgery more spectacular than the recent development in the surgical treatment of chronic anterior poliomyelitis. To the average physician and surgeon, infantile paralysis means helplessness, plaster casts, and braces; and to the layman it presents a picture of utter hopelessness and despair. The charlatan sees a golden opportunity for fleecing.

Confusion still exists, not only among the laity, but in the professional mind, as to what may be expected from treatment. When should it be started and of what should it consist? Ideally the orthopedic treatment of poliomyelitis should begin the moment the disease is diagnosed and continue throughout the lifetime of the patient. From a practical point of view the orthopedic treatment begins when the acute symptoms have subsided and should continue until the surgeon is satisfied that no further benefit could be expected.

The treatment aims are for:

1. The prevention of deformity from the contractures of non-paralyzed muscles.

2. Restoration of muscle function.

3. Operative procedure for stabilization and utilization of remaining groups.

A very careful and painstaking examination should be made to determine individual muscles involved, the extent and degree of the paralysis, whether partial, or total. And an evaluation must be made on the basis of whether opposing muscle groups are involved, and whether deformities might ensue. The parts paralyzed must be put at absolute rest in casts or splints in the position best suited in the maintenance of muscle balance and rapid recovery of the muscles involved. The so-called mid position (of function) is as a rule the physician's desire, that is, when splinting a leg with paralysis below the knee, the foot should be at right angles to the leg and half way between the varus and valgus. Because of the origin of the gastrocnemius from the condyles of the femur, the knee should be kept in full extension, but should the paralysis be in the upper extremity about the shoulder girdle, the deltoid is the muscle most commonly affected, therefore the arm should be fixed at right angle abduction to permit the deltoid to recover all it will without the pull of its opposing group.

We speak of rest as being the most valuable adjunct in the treatment of the acute paralytic stage. By rest we mean, not only to the part affected, but the entire body flat in bed. This is especially true when the back and upper extremities are involved. If the weight of the upper half of the body is superimposed on the lower half in the sitting or half reclining position with a paralysis of the back and abdominal muscles, a scoliosis rapidly appears. Therefore early, intelligent imposition of rest and splinting is of the greatest importance.

In addition to this the involved parts must be kept warm; this by dry heat or by the wrapping of the parts in suitable material, or both. Almost without exception pain in the involved muscles is a part of the disease process. Avoidance of handling or of active or passive motion will greatly reduce this pain but frequently the coal tar products and occasionally opiates are necessary. In this stage of the disease, immersion of the entire body in a hot tub bath not only relieves pain, but helps to relieve the spasm of muscles not involved in the paralytic process.

Massage is to be severely avoided until the muscle soreness is entirely gone. If given earlier while the involved muscles are sore, the tendency for spontaneous recovery is markedly retarded. The value of inactivity and avoidance of doing too much for the patient is a problem to put over with the parents and friends. To assure them that without massage healing will take place and later with it much more muscle recovery may be expected, is a good rule to follow. It is usually well to instruct the parents that no massage or physio-therapy is indicated until after about two months. The reason for this is that it is common knowledge that much is to be gained from massage and the parents are anxious to be doing something for the patient. It is not physiological to irritate and stimulate peripheral ends of nerves connected with the acute or sub-acutely inflamed nerve centers in the spinal cord. When tenderness in the muscles disappears, it may be assumed that the acute stage is over. When the acute stage is over, we encounter from a therapeutic standpoint the most perplexing period of the disease. It is my opinion that most of the orthopedic surgeons have agreed on two years as being the period of potential recovery and until the end of this two-year period, no operative treatment should be undertaken unless it is for the correction of deformity where early splinting has not been done in acute stage. Deformities occur first, by force of gravity; secondly, by unopposed action of active muscles; third, by habitual posture; and fourth, by functional use. The most common deformity is the drop foot or drop toe deformity, this being caused by the attitude as the patient lies in bed aided by the weight of the bed clothes.

Flexion contracture of the hips occurs on account of the unopposed action of the tensor fasciae femoris muscle. Posture, itself, as when a person sits when paralyzed, is enough to produce flexion contractures of the hips and knees.

The form of apparatus used for the prevention of deformity is not of so much importance and will naturally vary according to the training and desire of the surgeon, but the end result of all methods is the same, that is the prevention of deformity and the protection against gravity.

One of the hardest questions to answer is when to allow the patient up. On the one hand, we have the depressing effect of prolonged inactivity upon the patient, by keeping him off his feet for an indefinite period of time, for two years, and giving him nothing but massage and muscle training and, on the other hand, we know that over-fatigue of the weakened muscle is the greatest obstacle to recovery. The effect on the muscle must outweigh the mental attitude. I fail to see why a minimum amount of exercise can be harmful and it certainly has a psychological effect on the patient. This, of course, is allowed only with proper protection to the affected muscles accomplished by the use of braces and aided by crutches.

There is some controversy about what should be done during the two-year period agreed upon as a period of potential recovery. It is imperative that we continue to show an extreme interest in our patient from beginning to end, for after the muscle soreness has left, the patient or the parents of the patient usually take it upon themselves, by the ill advice of some of their friends, to consult a chiropractor or some form of quackery.

Rest to the affected parts should be kept up until the muscle soreness has subsided, then massage and proper muscle training with some passive and active motion is to be started.

Braces and night splints may be applied to the affected parts to prevent deformity and to protect the weak, paralyzed muscles from being over-stretched. No matter where in the body over-stretching of the paralyzed muscle exists, it will prevent rapid recovery and often the opposing non-paralyzed group will become so shortened by continued contraction that surgical procedures must be undertaken early to permit possible, normal use of the parts. We most frequently see this in contractures of the Achilles tendon causing a paralytic equinus and subsequent drop foot; and again it is seen in the contracture of the hamstring leading to a collapse of the knees on weight bearing, and in contractures of the hip flexures causing a compensating hollow back.

Faradism, galvanism, diathermy and baking are proposed by some to have value. This is seriously questioned by most of the writers but if they are to be used at all, they should be administered by those skillful and well trained in the art. Diathermy has been offered by some to be of value when applied to the spine in the early stages and probably the good results reported of it are due to the normal, spontaneous recovery that follows careful protection in most of the cases. Baking or some form of heat certainly has some value inasmuch as it warms up the parts. The skin temperature of the paralyzed part is always much lower than that of its fellow and it must constantly be kept in mind that some form of heat is necessary. Baking is essential too in warming up the parts preparatory to massage. There is a serious objection to use of galvanism inasmuch as it usually overtires muscles which are already the seat of a reaction of degeneration, or at least has so little nerve supply left that the period before fatigue is very short.

Practically all of the observers believe that electricity is of very slight value. Massage and the holding of the affected part in position to prevent deformity allows recovery to take place more rapidly than any other form of treatment.

Hydrotherapy is of value early, in the shape of hot baths and later by the use of the pool in swimming. In swimming the paralyzed parts are buoyed up by the water, the action of gravity is in a large part eliminated and active motion is encouraged and carried out with ease. It has often been noticed that patients that walk with great difficulty are able to swim long distances with ease. Exercise to the affected muscles is obtained when the body is buoyed up by water.

Again to repeat, no surgical procedure is to be undertaken during this two-year period unless it be for lengthening the tendons, tenotomies, and other such procedures to overcome contractures and acquired deformities. Some recovery often takes place during this two-year period with persistent massage and muscle training. When two years have elapsed, arbitrarily we can evaluate satisfactorily the condition and its needs for reconstruction surgery for rehabilitation of the patient.

Before attempting any reconstructive work, we assume that every form of legitimate treatment has been tried, that a certain amount of improvement has been gained, but it is agered by all, the patient, the parents, the doctor, that we are at a standstill. Some patients are reluctant to face the truth. The sooner a given situation is faced and the necessary adjustments made to it, the better it is for all concerned.

The principles of operative treatment are to make effective use of whatever muscle power remains and by various forms of tendon transplants and orthodesing operations for the stabilization of joints. It is an accepted fact that tendon transplantations alone are unsatisfactory in their end results, in that they all stretch or give way in a few years. Some type of point stabilization by a bone operation must be done. The feet and hands are where most of the operations are performed. The age of the patient must also be taken into consideration. It is recognized that bony union does not occur in orthodesing operations very readily in children too young. An arbitrary age limit of from nine to ten years has been set, before which one should not attempt an orthodesing operation.

It would be impossible to go into all of the many different operative procedures for the correction and stabilization of deformed and frail joints. Only in recent years have we been able to substitute operations for external splinting. A few of the many operations of the different parts of the body will be mentioned to give an idea of what they accomplish.

In the shoulder it rarely happens that all the muscles attached to the scapula are paralyzed. The humerus may be then fused to the scapula so that the arm moves with the scapula giving a fair degree of stability to the arm. The forearm may be suspended at right angles to the arm so that the hand may be brought to the face and various muscle transplantations may give a useful degree of motion to the fingers and thumb.

As mentioned previously, paralysis of either of the muscles of the abdomen and the back will result in a scoliosis, or curvature of the spine. After the two-year period there is no need for waiting or delaying a fusion of the spine. The operation of Albee or Hibbs, or a modified combination of the two, is quite satisfactory. It should be remembered, if the paralysis is extensive in the back, that an attempt to fuse the entire spine at one sitting is dangerous. This is a difficult and severe operation and too little is rather to be done than too much.

Deformities affecting the lower extremities are flexion contractures of the knees, of the hips, and with every possible variety of deformity of the foot. All of these may be fairly easily relieved by definitely established operative procedures that are now almost at the point of being standardized.

Orthodeses are more often done in the lower extremities and are done to improve weight bearing. Fusing of the tarsal bones is common procedure for mid-tarsal equinus. The stabilizing operation and bone block of Campbell is an excellent procedure in selected cases for foot drop. In the lower extremities, the transplantation of the tendons is secondary to orthodeses. This at least removes a deforming force.

A very disabling condition occurring at the knee is paralytic genu recurvatum which is due to a paralysis of the quadriceps muscle for which many operations have been devised. The procedure of ankylosing the patella to the tibia gives a very satisfactory knee joint.

Bone lengthening operations have been performed successfully many times and as much as two and one-half to three inches has been gained in length. It is a difficult, tedious procedure and requires months of post-operative care.

Bone shortening of the unaffected leg has been advocated by some orthopedists to promote better function of the limbs in walking.

Atrophy, both in circumference and length of the paralyzed part, always takes place where there is not rapid and complete recovery, and even when this happy eventuality does take place, there may appear later, after many years, mild club foot, or metatarsal equinus which will require surgery for the relief of the accompanying pain on weight bearing.

In my closing remarks, I would like partially to summarize and stress the seriousness of delay in diagnosis and in early treatment. I feel very strongly that our present day apathy toward anterior poliomyelitis is due to:

1. The family doctor's failure to recognize poliomyelitis, causing a serious delay in diagnosis and treatment.

2 The attitude taken by some doctors that, "There is nothing that can be done for infantile paralysis".

3. The feeling on the part of the family physician that if the child can walk at all after the acute stage that he is "getting along pretty well," no effort being made to prevent muscle strain or weight bearing as soon as the acute stage is over.

4. The lack of encouragement by the family physician for patients to return to the orthopedist at stated intervals. It is no trouble to get patients back for removal of casts but after that the doctor very often tells them there is no need to return for further check-up. May I repeat that long continued observation is necessary, both to encourage the patient and to correct deformities.

5. Some have the idea that if the child isn't practically normal when it comes out of the cast, that it hasn't been benefited by the treatment. We must remember that poliomyelitis is not a disease like mumps or measles, but is one in which improvement is extremely slow.

6. The disposition on the part of some doctors is not to use any corrective measures at all in the early stage, to continue symptomatic treatment only until the child is badly crippled and beyond the average doctor's ability to treat.

Of course, it is quite evident that the greatest accomplishment will be in the future in prophylactic innoculation as in diphtheria and other diseases. Many men are working honestly and enthusiastically on this phase of the disease. The reports of experiences in the reecnt epidemics have shown encouragement but no specific benefit from attempted curative treatment. The number of cases treated have been too small to be conclusive. We must keep an open mind, always being willing to encourage any scientific effort of investigation but avoid becoming excited and over enthusiastic and continue with our best known efforts until something that proves to be of value is offered.

It is gratifying to know that persistence in intelligent conservative treatment plus timely surgical intervention offers as much as it does and that even today we can often return a practically hopeless, permanent cripple as a useful, comfortable, self-supporting citizen.

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DISCUSSION

DR. THOMAS H. BLAKE, (Jackson):

I assure you it is a pleasure to have Dr. Bagwell down and I have certainly enjoyed his paper enormously. This is a subject that is very dear to my heart, as I have in the past two or three years seen close to 300 cases in the acute stage, and many of them I have been fortunate enough to follow all the way through their treatment up to this date. I have a few observations that I have made in these cases that I would like to repeat. One is that about 90 per cent of the children affected, that is those that I have seen, are blondes or red heads. They are of the fair complexion type. Of course, we have a few negroes, but they are usually the ginger cake negroes, not the black ones. For some reason apparently the tissue structure has to do with the susceptibility to this disease. Of course, it is probably true that more children are blondes than brunettes, but that is one of the observations I have made.

The next is these children should be placed on a hard surface as soon as possible. Most of these are little tots and as soon as the diagnosis is made they should be put on a rigid surface. This is a very simple matter with a little tot—a little fellow below the age of eight —to lay him on an ironing board, or any broad plank, of course, placing a pillow or folded quilt on top of that to make him comfortable, but have a non-sagging surface. We must remember that the spine is the site of the entire disorder, and that is one of the first places we should treat. Of course, there is a paralysis of the feet, arms and so on, but the paralysis of the arms is entirely secondary to the source of the disease which is in the spine.

Early Treatment: I have had many cases brought into the polio clinic at the end of six weeks, stating the patient was too sick to bring him in before that time. No one waits a month or six weeks to bring in a case of appendicitis because it is too sick ;they don't get too sick to bring them in for treatment, except in the bulbar type. I do not mean to jeopardize the child at all, but by the end of the eighth day—that is the customary time maximum paralysis and maximum advance of the disorder are taking place—by the end of that time they should be placed in some type of supporting appliance. The method of treatment selected by the majority of the people is absolute fixation of the parts affected, as Dr. Bagwell brought out. There is one point I would like to add, that it is my personal impression that each patient regardless of the location of his disorder, should have his spine included. Fixation of the spine is of great importance. That is the location of the disease, and it is of great importance to fix that region to minimize the the trauma of simple motion. It adds enormously to the patient's comfort. I have had many mothers to state that the first night this child was placed in the cast was the first time he had slept in days. It adds enormously to his comfort, and it is my impression that it adds to future prospect of cure in the case.

Massage is the best treatment we have, but the massage must be begun at the right time. Unfortunately people want to do something; so many of them remark, "Do not put a cast on him, I can't get to him to rub him." If it can be impressed that no treatment is good treatment after he is placed in the plaster, a great deal will have been accomplished. It is extremely difficult to sell the mother on that idea, but, you can explain to her that a broken nerve should be treated just as a broken bone, she will usually see the light, and that is of the greatest importance. Stay away from massage and the other types of physical therapy in the early stage, but use it in the second stage.

Again I want to thank Dr. Bagwell, and I have certainly enjoyed his paper.

DR. F. M. SMITH (Vicksburg): I want to call your attention to a few things that impressed me. I understood Dr. Bagwell to say that the incidence of crippling remains practically the same, and in the epidemics we are having these children who are attacked experience some form of paralysis or crippling. I also understood him to say that there were no measures of vaccination that had been proven successful, and that the Year Book had actually condemned all the work that had been done in vaccination. If I did not misunderstand him he did not offer us much encouragement in our alum spray. He did stress that early treatment was most important, that end results were so greatly effected when rest and splints could be applied, and the end results were so discouraging when this was not done.

He stressed the fact that no surgical or reconstructive intervention was to be thought of under 2 years. Now with these pertinent facts before us, if any of you have had the experience of going through even a mild epidemic, and seeing the despair that comes from the mother or parents when the child who was active a few days ago is now stricken and paralyzed, if you will visualize for a moment how they yearn and almost demand that something be done, and done now. With these facts before us I visualize the greatest responsibility for the medical profession and the health officer especially, is to get this information over to the people so that they can understand that all worth while, or the best known treatment is being done. That is something that I believe we have got to do. I have in mind one child sent by a most competent pediatrician from our city to Dr. Blake, and because he would not give the mother every assurance of immediate cure or satisfactory end results that were beyond the shadows of doubt, she went to a pseudo physician of another school and got all the promises of cure that she wanted, and he got all he could get, and the child remains markedly crippled, more so than others affected. The point I want to express or make emphatic is our duty in getting these facts, rational management and treatment stressed by the essayist, to the laity.

DR. BAGWELL (Closing): I certainly appreciate the splendid discussions of Dr. Smith and Dr. Blake, and indeed it is a very interesting observation that Dr. Blake has made on the ginger cake negroes and blondes and red heads. I do not believe that I have heard that before, but it is an interesting observation. It has certainly been a pleasure to have been in Jackson, and I have enjoyed it very much. I thank you.

* * *

Mississippi State Medical Association

Leon S. Lippincott, Vicksburg .... Editor
G. S. Bryan, Amory .... Associate Editor
Leslie V. Rush, Meridian .... Associate Editor

Papers and news material for publication should be received not later than the fifth of the month preceding publication.

The editors are not responsible for statements made by any contributor.

Manuscripts and all material for publication should be addressed to the editor, P. O. Drawer 231, Vicksburg, Mississippi.

EDITORIALS

FROM OUR PRESIDENT-ELECT

To: The Secretaries of the Medical Societies of The Mississippi State Medical Association:

My dear friends,

Sir William Osler once said:

> "We doctors do not take stock often enough and are very apt to carry on our shelves stale and out-of-date goods. The society helps to keep a man up to the times and enables him to refurnish his mental shop with the latest wares. It keeps his mind refilled and receptive and counteracts that tendency to premature senility, which is apt to overtake the man who lives in a routine."

The various medical societies of our Association offer many advantages and privileges to its members, benefits that can not be acquired anywhere else.

An active member can be assured of

1. Relaxation from the grind of a busy practice, or an escape from the anxiousness of "watchful waiting" for the hoped-for patient.
2. Fellowship of men, interested in the same problems.
3. Opportunity to learn.
4. Inspiration for better work.
5. Consultation, that may mean the difference between success and failure.
6. Protection in the practice of the vocation.

Therefore, may the suggestion be made, that you, as secretary of your society or thru some membership committee, contact every eligible doctor within your territory and sell him on the merits of membership in organized medicine?

Remember that this must be done before April first for the member to be eligible to our legal protective fund.

It seems very likely that when the Congress convenes this month and when the various legislatures assemble, there will be proposed, and most surely carry in some form, laws that will to a great extent change the entire practice of medicine, that we have built and cherished.

The medical associations of New York and California have already adopted procedures that lead toward prepayment health insurance, and on November 8, 1938, the electorate of New York State by a three to one vote adopted an amendment that means state medicine enters into the constitution of New York State, and other states are sure to follow.

George Matthews Adams in his "Freedom's Heritage" gave expression to a sentiment that means much to doctors in this transitional period that we are facing, when he said:

> "The most precious possession of any human being is his freedom—his freedom to think and express himself, his freedom to go and to come as he may, his freedom to worship in his own way and his freedom to work without interference."

Organized medicine can hope for this freedom, only when it presents an united front to those forces, heretofore insidious but now openly militant, working for the destruction of those relationships that mean so much to doctor and patient and that confidence so dear to both.

Public confidence and trust in the doctor is essential to the effectiveness of his work; no doctor can survive and no system of medicine can endure without the faith that follows a leadership, believed to be honest and capable, and when this is lost, the doctor's day of usefulness begins to wane and rapidly approaches the vanishing point.

Dr. Irvin Abel, the President of THE AMERICAN MEDICAL ASSOCIATION recently said:

> "The medical profession is committed to the idea that the prime object, the standard of value and the social reason for its existence are all one thing—the service it can render humanity."

With the campaign to be waged against us, we need every doctor in our ranks, and every doctor needs our united strength.

Yours for better medicine,
J. P. WALL,
President-elect,
Miss. State Med. Ass'n.

FORTY YEARS AGO

Some one has asked, "What is time?" It is the shadow on the dial, the striking of the clock, the running of the sand in the hour glass, day and night, summer and winter, through months, years and centuries? And in their reply have said, "No, these are but arbitrary outward signs, the measure of time, not time itself. Time is the life of the soul."

Some while back a friend presented us with an old yellow and faded manuscript that had been pigeonholed for many years. There may be others in existence, but we prize this one most highly, not alone for its age, but for the interesting story it tells of a momentus happening that occurred forty years ago—we recant and apologize for calling it a happening when it is evident it was a policy formulated after careful thought and prolonged deliberation.

Perhaps this created department of health as detailed in this manuscript, came into existence for only a short while, performed little or no outstanding service. However, this may be, we opine that in some way it was "father to the child" of our present Department of Health—although their objectives seem widely different. Neverthless, we appreciate this record as it details the activities and constructive achievements of men of our own city and county who walked and talked with us in our near yesterdays.

If "time is the life of the soul," and if Cicero was correct in referring to the soul as that which thinks, understands, wills, acts and is eternal, then the action of these men in the organization of the Mississippi Department of Public Health forty years ago manifest a soul of understanding, of will, and action that will live for many "forty years" yet to come.

THE MANUSCRIPT

On the third Wednesday of April, 1898, the Mississippi State Medical Association went into a recess of ten minutes to allow members of the Mississippi State Medical Association to organize the Mississippi Department of Public Health.

Dr. W. M. Paine, on motion of Dr. H. H. Haralson, was elected temporary chairman, and Dr. J. R. Tackett, on motion of Dr. H. M. Street was elected temporary secretary.

The motion of Dr. W. G. Kiger for the adoption of the report of the committee on public health of the Mississippi State Medical Association as recommending the organizatoin of Mississippi Department of Public Health, was then placed before the members of the Mississippi State Medical Association. On motion of Dr. H. H. Haralson a roll call of said members was taken and the 88 ayes without a dissenting vote were recorded in favor of the adoption of said report.

A permanent organization of the Mississippi Department of Public Health was then perfected by the unanimous election of Dr. W. G. Kiger as president on motion of Dr. H. H. Haralson, and the election of Dr. J. R. Tackett as secretary, on motion of Dr. H. N. Street.

The constitution and by-laws of the Mississippi Department of Public Health as herewith appended, were then read and adopted.

CONSTITUTION AND BY-LAWS
of the
MISSISSIPPI DEPARTMENT OF PUBLIC HEALTH

As adopted third Wednesday of April, 1898

Article I. Name.

The department shall be known and designated as the Mississippi Department of Public Health.

Article II. Object.

The object and purpose of the department shall be the collection of vital statistics, the development of medical literature and a general superintendence over the health interests of the state.

Article III. Membership.

Section 1. Any licensed practitioner of medicine in the State of Mississippi, who is a graduate of an approved institution of medicine, may, on application, have his name enrolled as a member of the department.

Section 2. Membership in the department shall be forfeited by violation of the rules and regulations of the department.

Article IV. Seal.

The department shall have a seal having around the margin the words "Mississippi Department of Public Health" and in the center such device as the department may select; and the acts of the department shall be authenticated by its seal.

Article V. Officers.

Section 1. The officers of the department shall be a President and Secretary, who shall be elected for a term of one year each and an executive committee consisting of one member from each congressional district who shall be appointed by the President.

Section 2. The President shall preside at all meetings of the department, preserve order and regulate the debates and other business according to parliamentary usage, have general superintendence over the vital and medical statistical work of the department, and perform all other duties that may be required of him. He shall not be eligible for two successive terms.

Section 3. The Secretary shall give due notice of all meetings of the department, keep a correct list of all of its members, keep accurate minutes of the proceedings of the department, preserve the records of the department as may be required of him, read at the meetings of the department such communications and answers as may have been received or written during the preceding recess, and deliver his books and papers to his successor when he retires from office.

Article VI. Bureaus.

Section 1. The Bureau on public health of the department shall be the State Board of Health.

Section 2. The Bureau on Vital Statistics shall be the Hospital Medical College when established at Vicksburg.

Section 3. The Bureau on State Medicine of the Department shall be the Executive Committee of the Department.

Article VII. Committees.

The Executive Committee of the department shall govern and direct the work of the department and carry out its duties as prescribed by law.

Article VIII. Meetings.

The regular meeting of the department shall be held annually in the Capitol of the State on the third Wednesday of April, 1898, and shall continue in session from day to day until all its business is transacted.

Article IX. Rules and Regulations

Section 1. Rules and Regulations of the Mississippi State Medical Association.

Section 2. Rules and Regulations of the State Board of Health of Mississippi.

Section 3. Code of Ethics of the American Medical Association.

Article X. Order of Business.

1. Calling the roll.
2. Reading the minutes.
3. Reports of officers and Executive Committee.
4. Unfinished business.
8. New business including the election of officers.
9. Installation of officers-elect.
10. Adjournment.

Article XI. Amendments.

The constitution and by-laws of the department may be altered, amended or suspended at any time by a two-thirds vote of those present and voting at the regular meetings of the department.

F. MICHAEL SMITH

Vicksburg, Miss.
Jan. 14, 1939.

SOUTHERN SECTIONAL MEETING OF THE AMERICAN COLLEGE OF SURGEONS

The Southern Sectional Meeting of the American College of Surgeons was held at Nashville, Tenn., January 18, 19, 20, at the Andrew Jackson Hotel.

The program of operative and non-operative clinics in the Nashville hospitals embraced general surgery, eye, ear, nose and throat surgery, and the other surgical specialties. Two major clinics were held, fractures and cancer. Clinical assemblies, scientific sessions, panel discussions, and medical motion pictures provided a very complete program. Dr. Hugh A. Gamble, Greenville, was a collaborator in the discussion of "Post-operative Care of the Abdominal Case."

The Hospital Standardization Conference, embracing eight sessions, included addresses, panel and round table discussions, demonstrations, motion pictures, and other phases of particular interest to fellows of the college and members of medical staffs of hospitals generally. The panel discussion, "The Small Hospital and Its Problems," was conducted by Dr. Leon S. Lippincott, Vicksburg; personnel problems being discussed by Miss Helen Branham, R.N., Tupelo, and professional problems, by Dr. A. M. McCarthy, Electric Mills.

Participating states were Tennessee, Arkansas, Missouri, Mississippi, Alabama, Georgia, Florida, Kentucky and Louisiana.

THE SOUTHEASTERN SURGICAL CONGRESS

The Southeastern Surgical Congress announces the Tenth Anniversary Post-graduate Surgical Assembly to be held in Atlanta, March 6, 7, 8, 1939, at the Biltmore Hotel.

The following is a partial list of speakers on the program:

Abell, Irvin, Louisville, Ky.—C. Jeff Miller Memorial Lecture.

Alvarez, Walter, Rochester, Minn.—Hints in the Treatment of Gastro-Intestinal Disease.

Babcock, W. Wayne, Philadelphia, Pa.—Interior Exteriorization in Abdominal Surgery.

Bunch, George H., Columbia, S. C.—Acute Epidural Abscess With Compression of Cord.

Campbell, Meredith F., New York City—Urologic Surgery in Children.

Cason, T. Z., Jacksonville, Fla.—Medical Pathology Stimulating Acute Surgical Conditions—Differential Diagnosis.

Cooke, W. R., Galveston, Tex.—The Surgical Treatment of Suppurative Salpingitis.

Crile, George W., Cleveland, Ohio—The Surgical Treatment of Essential Hypertension.

Dickson, Frank, Kansas City, Mo.—Surgical Reconstruction of the Arthritic Patient.

Fishbein, Morris, Chicago, Ill.—Fads and Quackery in Healing.

Flothow, Paul G., Seattle, Wash.—Advances and Retreats in Neurological Surgery.

Folsom, Alfred I., Dallas, Tex.—

Gage, Mims, New Orleans, La.—Acute Cholecystitis: Etiology, Clinical Mainfestations and Immediate and Late Treatment, with Special Emphasis on Conservative Treatment.

Haggard, W. D., Nashville, Tenn.—Gall Bladder Syndromes. Clinic.

Hart, Deryl, Durham, N. C.—Parathyroid

Tumors.

Hendon, A. G., Louisville, Ky.—The Influence of Negative Pressure in the Bladder on Kidney Function.

Hertzler, Arthur, Halstead, Kan.—The Gioter Heart. Clinic.

Johnson, W. O., Louisville, Ky.—Emotional Disturbances Associated with Pelvic Symptoms.

Kessler, Henry H., Newark, N. J.—Rehabilitation of the Physically Handicapped.

Lockwood, A. L., Toronto, Can.—Surgical Life Guards.

Lyerly, J. G., Jacksonville, Fla.—Transaction of the Prefrontal Lobe Association Fibres in Certain Mental Disorders.

Maguire, Daniel, Charleston, S. C.—Hand Infections and Their Treatment.

Mahorner, Howard, New Orleans, La.—Optimum Interval of Delay for Operation Following Appendiceal Complications.

McGehee, J. L., Memphis, Tenn.—Immediate versus Delayed Treatment of Acute Appendicitis—A Statistical Study.

McKay, R. W., Charlotte, N. C.—Vesico-Vaginal Fistula.

Mixter, William J., Boston, Mass.—Epilepsy in Neurosurgery.

Noland, Lloyd, Fairfield, Ala.—The Management of Acute Thyroid Disease.

Penberthy, Grover C., Detroit, Mich.—The Control of Paralytic Ileus by Intestinal Intubation.

Rankin, Fred, Lexington, Ky.—Bleeding Peptic Ulcer—Indications for Surgery.

Reid, Mont R., Cincinnati, Ohio—The Mortality of Appendicitis—A National Disgrace.

Rippy, Edward L., Nashville, Tenn.—Carcinoma of the Stomach.

Roesler, Hugo, Philadelphia, Pa.—Some Cardiovascular Problems of Interest to the Surgeons.

Ruddock, J. C., Los Angeles, Cal.—

Singleton, A. O., Galveston, Tex.—Spleenectomy.

Stewart, W. H., New York City—Cine-fluroscopic Studies in Diseases of the Chest.

Trout, Hugh H., Roanoke, Va. — Breast — Motion Picture in Colors.

Ward, George Gray, New York City—Uterine Displacements.

For information write Dr. B. T. Beasley, Secretary-Treasurer, 701 Hurt Building, Atlanta, Georgia.

MISSISSIPPI STATE BOARD OF HEALTH

Members of the State Board of Health held their semi-annual meeting in Jackson, December 8. Nine reciprocity licenses were granted, health officers appointed during the six-months' period were confirmed, and other business considered.

Physicians to whom licenses were granted are as follows: Dr. David R. Minter, Rosedale, from Texas; Dr. Benjamin A. Stafford, Rolling Fork, from Texas; Dr. William Lloyd Smith, Clarksdale, from Tennessee; Dr. G. R. Post, Holly Springs, from West Virginia; Dr. Robert James Moorhead, Yazoo City, from Tennessee; Dr. Samuel Wesley James, Ackerman, from Louisiana; Dr. S. K. Johnson, Brandon, from Tennessee; and Dr. H. E. Hoke, Gulfport, from Texas.

Health officers confirmed are as follows: Dr. R. H. DeJarnette, Alcorn; Dr. L. H. Eubanks, Holmes; Dr. John H. Mines, Madison; Dr. Guy R. Post, Marshall; Dr. T. L. Owings, Pearl River; Dr. B. A. Stafford, Sharkey-Issaquena; Dr. B. F. Hand, Washington; Dr. R. A. Clanton, Grenada; Dr. G. H. Woods, Panola.

Members of the board are as follows: Dr. J. W. Lipscomb, Columbus, president; Dr. S. E. Eason, New Albany; Dr. L. B. Austin, Rosedale; Dr. B. J. Shaw, Slate Springs; Dr. W. H. Eubanks, Philadelphia; Dr. H. L. McKinnon, Hattiesburg; Dr. L. W. Brock, McComb; Dr. John B. Howell, Canton; Dr. William R. Wright, Jackson, dental member; and Dr. Felix J. Underwood, Jackson, executive officer.

* * * *

Starting January 3, eight Mississippi physicians began post-graduate work at Tulane University on fellowships awarded by the Commonwealth Fund.

These men are as follows: Dr. L. B. Merriam, Waynesboro; Dr. W. B. Hickman, Louisville; Dr. Paul Jackson, Liberty; Dr. Howard L. Boone, Stonewall; Dr. Columbus L. Field, Shaw; Dr. Preston S. Herring, Vicksburg; Dr. V. D. Franks, Marks; and Dr. Amon K. McMillan, Lucedale.

* * * *

A statewide malaria control project amounting to $1,360,729, has been approved by the President and will operate for one year in Mississippi, according to an announcement by H. A. Kroeze, director of sanitary engineering.

The project is a renewal of an existing program now operating, in 69 counties and 92 different units of work. The program will provide approximately 35 miles of concrete ditching and 90 miles of open ditching, inclusive of sodding. Purpose of the project is build malaria out of Mississippi.

Malaria, though decreasing, is still a major disease in the state. Almost 50,000 cases of this disease were reported in 1937, and its debilitating effects were responsible for uncounted deaths.

* * * *

Another step forward made possible by the Works Progress Administration is an annex to the State Hygienic Laboratory, made necessary under the expanded syphilis program. This project amounts to $10,614, and work will begin early in the new year.

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Dr. W. H. Cleveland of Tupelo, Director of the Lee County Health Department was made president-elect of the Mississippi Public Health Association and Dr. F. Michael Smith of Vicksburg, Warren County Health Officer, was elevated to the presidency of this group at its annual meeting in Jackson, December 8-9. Mr. H. A. Kroeze, Director of Sanitary Engineering is the retiring president.

Dr. J. A. Milne, Director of County Health Work, State Board of Health, was re-elected secretary-treasurer. Section chairmen were named as follows:

Administrative, Dr. C. R. Gillespie of Indianola, succeeding Dr. D. V. Galloway of Meridian; Laboratory, J. A. Ledieu, Cleveland, succeeding J. C. Register, Jackson; Sanitation, T. F. Durham, Jackson, succeeding R. H. Riggin, Tupelo; Dental Hygiene, Miss Sarah Hill, Jackson, succeeding Miss Emily McQueen, Holly Springs; Nursing, Mrs. Josephine Jones, Meridian, succeeding Mrs. Ella Sayle, Indianola, succeeding Mrs. Georgia B. Stewart, Jackson; Vital Statistics, Z. E. Oswalt, Jackson, succeeding Mrs. A. M. Jones, Jackson.

Highlight of the meeting was the presentation of a portrait of Dr. Underwood on behalf of the State Board of Health, Central Office, and County Health Departments. The portrait was painted by Karl Wolfe of Jackson and will hang in the Medical Library of the State Board of Health.

In the President's Address to the Association, Mr. H. A. Kroeze, Director of Sanitary Engineering, called public health work "an opportunity for service." "As a reward for unselfish service," he said, "regardless of the motive, I believe a career in public health work offers unlimited opportunities in personal satisfaction and services to the community."

Outlining the broad scope of public health, Mr. Kroeze stated that careers in public health today consider the relation of housing, atmospheric pollution, and air conditioning to health; the effect of personal hygiene on the well-being of the community; the necessity for more research and control in the malaria problem, in the syphilis control program, in pneumonia, and tuberculosis.

Knowledge of mental hygiene, accident prevention, cancer, and heart disease is undergoing a rapid evolution, bringing changing conceptions to public health problems and enlarging the field of public health service, he said.

* * * *

The film, "The Birth of a Baby," was shown to members of the Central Medical Society and the Mississippi Public Health Association, December 9.

The picture is designed to help reduce maternal and infant mortality, avert fears of child-bearing, prevent abortions, impress fathers with their responsibilities, and to entertain.

Designed by the Committee on Maternal Welfare also to assist physicians and obstetricians who may be out of touch with some of the latest methods of technique, the film gives them a "post-graduate" course in the methods of prenatal care and care during and after birth.

"It is an educational picture, in which all adults will be interested, and from which all can reap a great deal of common sense knowledge," said Dr. Felix J. Underwood. "The country as a whole is reacting favorably towards the picture as being very helpful to expectant mothers, and slowly, as the true story of the picture is learned, the prejudice against it is being broken down."

* * * *

The occurrence of nearly forty cases of typhus fever in the state during the last two months of 1938 has lead to community campaigns to eradicate rats in a number of Mississippi towns.

A district agent of the U. S. Biological Survey is leading the fight against rodents, the most frequent carriers of the tiny flea which transmits the disease.

Other towns wanting rat riddance are requested to communicate with Dr. George E. Riley, assistant epidemiologist, Division of Preventable Disease Control of the State Board of Health.

* * * *

Staff conferences during December were held by Dr. W. D. Hickerson and Dr. D. L. Anderson, tuberculosis field clinicians from the Sanatorium, and by Mr. Q. E. Gatlin, medical organizer, Miss Louise Williams, librarian, and Miss Eleanor Hassell, assistant supervisor of health education.

The most valuable case-finding method is the examination of contacts of tuberculous cases, Dr. Hickerson said. While tuberculin testing and x-raying of school children are important, he state, it is desirable to avoid too frequent examination of positive tuberculin reactors as such children tend to become overly anxious about their health.

Dr. Anderson discussed two important points in the tuberculosis control program, namely

(1) the new pneumothorax treatment program being initiated in Hinds County through the co-operation of the Central Medical Society, the Hinds County Health Department and the Hinds County Tuberculosis Association; and (2) the value of the industrial hygiene program as carried on by Dr. Dugger. Dr. Dugger uses a portable x-ray and finds a very high percentage of tuberculous individuals among the factory group.

Health education was called the heart and soul of preventive medicine at the later conference. Mr. Gatlin pointed out that the medical education program is designed for physicians unable to leave their practice for post-graduate instruction. He stated that refresher courses have been brought to physicians in the state by the most outstanding medical talent in the country. Principal subjects covered have been obstetrics, pediatrics, and syphilis.

The Medical Library, Miss Williams said, serves medical and allied professions of the state in research material and by current periodicals. Large gifts of books from physicians of the state in addition to purchases are making the Medical Library one of wide selection.

Miss Hassell discussed means of public health education, including newspapers, radio, exhibits, films, magazine articles, talks, letters, and meetings.

* * * *

Post-graduate courses of instruction in sanitation have been awarded Carey Owen of Cleveland, sanitation supervisor in Bolivar County; and M. A. Greer of Yazoo City, sanitation supervisor in Yazoo County. Both supervisors will go to Vanderbilt School of Sanitation, Nashville, for a three months' course.

* * * *

Out-of-state visitors to the State Board of Health during December included Frank Blasher of Alaska; Miss Pauline Brooks Williamson, Chief, School Health Bureau, Metropolitan Life Insurance Company, New York City; and Miss Anne Marbury of the American Committee on Maternal Welfare, Chicago, Ill.

* * * *

Out-of-state duties during December called Dr. Underwood to Washington, D. C., December 3, for a meeting of the Advisory Committee on Maternal and Child Services; to Little Rock, Arkansas, December 5, where he talked to the annual conference of the Arkansas State Board of Health on "A Mississippi County Program of Maternal Care"; to New York on December 16, for a meeting of the Board of Scientific Directors of the Rockefeller Foundation; and to New York again December 28, for a meeting of the Advisory Committee of the Commonwealth Fund.

* * * *

State Board of Health radio program over WJDX, broadcast at 9:30 A. M. Saturday morning, was as follows during December:

December 3. Mr. Logan H. McLean, Executive Secretary, Mississippi Tuberculosis Association, Sanatorium, Miss.—"Christmas Seals—Heralds of Hope."

December 10. Miss Pauline B. Williamson, Chief, School Health Bureau, Metropolitan Life Insurance Company, New York, New York—"School Health Education."

December 17. Dr. N. C. Knight, Director, Coahoma County Health Department, Clarksdale, Miss.—"The Role of Public Health in School Health Education."

December 24. Dr. Felix J. Underwood, Executive Officer, State Board of Health, Jackson, Miss.—"A Christmas Message."

December 31. Dr. J. A. Milne, Director, County Health Work, State Board of Health, Jackson, Miss.—"A New Year's Message to Parents."

Jackson, Felix J. Underwood,
January 4, 1939 Executive Officer.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION: Seventy-Second Annual Session and Thirty-Sixth Annual Session of the House of Delegates, Gulfport, May 9, 10, 11, 1939.

Adams County Medical Society: W. K. Stowers, Natchez, president; F. S. Dixon, Natchez, secretary. Meets third Tuesday, each month, Natchez, 7:30 p. m.

Amite County Medical Society: W. S. Stewart, Oskya, president; D. H. Thornhill, Crosby, secretary. Meets second Thursday, each month with Wilkinson County Medical Society, Field Memorial Hospital, Centreville.

Central Medical Society: J. T. Rainer, Yazoo City, president; Lawrence W. Long, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. D. House, Sledge, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: William P. Warfield, Clarksdale, president; N. C. Knight Clarksdale, secretary. Meets second Wednesday each month, Alcazar Hotel, Clarksdale, 12 noon.

Coast Counties Medical Society: F. O. Schmide, Ocean Springs, president; D. L. Hollis, Biloxi, secretary.

Delta Medical Society: C. W. Patterson, Rosedale, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

DeSoto County Medical Society: President, Dr. Henry M. Wadsworth, Hernando.

East Mississippi Medical Society: C. H. Harrison, Philadelphia, president; Bob A. Cameron, Meridian, secretary.

Franklin County Medical Society: C. A. Everett, Bude, president; L. Costley, Meadville, secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: Dr. Walter E. Johnston, Vicksburg, president; Dr. Alston Callahan, Vicksburg secretary.

Marshall County Medical Society: C. R. Senter, Byhalia, president, Herbert Phillips, Holly Springs, secretary. Meets second Thursday each month, alternating between Byhalia and Holly Springs.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society. V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary.

North Mississippi Medical Society: R. M. Adams, Ripley, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen-County Medical Society: Dr. R. J. Brown, Iuka, president; A. J. Stacy, Tupelo, secretary. Meets third Tuesday, March, June, September, December.

Pike County Medical Society: E. M. Givens, McComb, president; T. Paul Haney, Jr., McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Sunflower County Medical Society: U. S. Wasson, Moorhead, president; H. B. Cottrell, Indianola, secretary.

Tallahatchie County Medical Society: G. Lacy Biles, Sumner, president; G. D. Hightower, Webb, vice president; J. E. Powell, Charleston, secretary.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: (Copiah-Lawrence-Lincoln-Walthal), R. S. Savage, Brookhaven, president; R. B. Zeller, Hazlehurst, secretary. Meetings for 1930: Wesson, March 14th, 12:15 p. m.; Tylertown, June 13th, 12:15 p. m.; Monticello, Sept. 12th, 12:15 p. m.; Brookhaven, Dec. 12th, 12:15 p. m.

Webster County Medical Society: E. F. Arnold, Bellefontaine, president H. K. Curry, Eupora, secretary.

Wilkinson County Medical Society: C. E. Catchings, Woodville, president; E. M. Butler, Centreville, secretary. Meets second Thursday, each month, with Amite County Medical Society, Centreville.

Winona District Medical Society: T. J. Brown, Grenada, president; S. B. Caruthers, Grenada, secretary.

DELTA MEDICAL SOCIETY PROGRAM TO BE HELD IN GREENVILLE APRIL 12

"Electrocardiogram as an Aid to Diagnosing Heart Conditions." — Ira B. Bright, M.D., Greenwood.

"Sulfanilamide—Its Use in General Practice."—Joe G. Peeler, M.D., Shaw.

"The Management of Diabetes in Country Practice."—O. P. Myers, M.D., Indianola.

"Cancer of the Colon."—E. T. White, M.D., Greenville.

"Allergy."—J. R. Jackson, M.D., Belzoni.

"What the Present Trend Towards Socialized Medicine Is Going To Do To The General Practitioner."—O. W. Hyman, M.D.. Guest Essayist, Dean of University of Tennessee Medical School, Memphis, Tenn.

Greenville, F. M. Acree
January 14, 1939. Secretary.

DESOTO COUNTY MEDICAL SOCIETY

The DeSoto County Medical Society convened in regular order Monday, January 2. After an interesting round table discussion of matters pertinent to the profession, the election of officers followed: President, Dr. Henry Manley Wadsworth, Hernando; Vice-President, Dr. Albert Vernon Richmond, Lake Cormorant; Secretary-Treasurer-Editor, Dr. Lancelot Longsteet Minor, Rt. 4, Memphis, Tenn.; Delegate to the State Association, Dr. Angus Leslie Emerson; Alternate Delegate, Dr.

John Marion Wright, the latter two of Hernando; Censors, Drs. John A. Rhodes, Horn Lake, Denver C. Funderburke, Alive Branch, and Charles Whitley Emerson, Hernando.

The next meeting will be on April 3, subject "Oddities in the News Medically." We wish all of our doctors would attend these meetings. Dues are only $4.50.

In sickness the doctor is the first one thought of, in health often the last. It takes much time, money and effort to become a physician. His ambition is to help you fight your ailments and also to prevent these ailments. Give your physician a helping hand and sympathetic aid. Do not put off seeing him. Consult your home doctor first.

The Hernando doctors provided a fine dinner at the Spencer House for the members. Also present were Dr. J. A. Milne, Jackson, Director of County Health Work, Dr. J. W. Evans, new health officer of the county, and Mr. Herbert Moore, sanitary supervisor of the county.

We welcome the two health officers to our county and trust that their work will be beneficial to the people.

The Drs. Emerson have been the county health officers for some ten years or more. It is needless to say that they have done well, been capable and constructive.

Rt. 4, Memphis, L. L. Minor,
Jan. 8, 1939 Secretary.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

The regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Mississippi State Charity Hospital, Vicksburg, Tuesday, Jan. 10. A dinner was served at 7:00 p. m. Dr. Walter E. Johnston, president, presided.

The speaker was Dr. Felix J. Underwood, Jackson, who discussed in a most comprehensive way the affairs of the medical professor with special reference to national progress. Dr. Underwood's address was followed by a round-table discussion. The program was of great interest and of real value to the members of the society.

The report of the secretary for the year 1938 showed:

Membership: Issaquena County, 1; Sharkey County, 8; Warren County, 29; Warren County Life, 1; Other Honorary, 8; Total 47, a gain of 3 members for the year.

There were twelve regular meetings, with a total attendance of members of 255 and guests 106; average attendance was 30.1. Fourteen members presented papers during 1938, a percentage of 29.8. There were twelve guest speakers, during year. There were within the society jurisdiction, licensed physicians, non-members of the society, from Issaquena County, 1; from Sharkey County, 7; from Warren County, 11. Estimated possible members for 1938 are: Issaquena County, 1; Sharkey County, 7; Warren County 28.

The average attendance of members at meetings during the year was 47.7, a gain of 6.6% over 1937.

The report of the Out Patient Clinic of the Charity Hospital operated under the direction of the society showed total number of patient visits during the month of December of 1259, or a daily average of 41. Division by services showed medical, 100; surgical, 115; obstetrical, 21; gynecological, 75; eye, ear, nose and throat, 65; orthopedics, 8; pediatrics, 22; genito-urinary, 675; 178 patients were admitted to the hospital. Patients came from 16 counties of the state and from Kentucky, Louisiana, and Tennessee.

Quarterly Meeting of the
NORTH MISSISSIPPI MEDICAL SOCIETY
At University of Mississippi

WEDNESDAY, JANUARY 18, 1939
1:30 p. m.
—Graduate Building Auditorium—

PROGRAM:

1:30 P. M. — Minutes of Preceding Meeting and Other Business.

2:00 P. M. — "A Motion Picture Study of the Heart in Health and Disease."—R. Lyle Motley, M.D.

2:45 P. M. — "Difficult Deliveries — Cause and Correction."—W. T. Pride, M.D.

3:10 P. M. — "Intraspinal Rupture of the Intervertebral Discs, or Hypertrophied Ligamentum Flavum as a Common Cause of Low Back Pain and Sciatica, with Special Reference to the Clinical Picture and Operative Relief." (Motion Picture and Slides).—R. Eustace Semmes, M.D.

3:35 P. M. — "Citrated Blood Tranfusions." —L. W. Diggs, M.D.

4:00 P. M. — "Pre- and Post-operative Care of Abdominal Surgical Conditions."—J. L. McGehee, M.D.

4:25 P. M. — "Pyelitis in Children, with Special Reference to Diagnosis and Treatment."—E. C. Mitchell, M.D.

This is a special program presented by members of the faculty of the University of Tennessee Medical School. All members and their friends are urged to make every effort to be present.

Notice to Society Members: Have you paid your dues?

C. M. Speck, A. H. Little,
President. Secretary
New Albany, Oxford.

DESOTO COUNTY

The first institutional instruction of the blind attempted in the United States was by a physician, John Denison Russ (1801-1881), who was born at Chebacco (Essex), Mass., graduated at Yale in 1823 and studied medicine in the Unitel States, in London and on the Continent.

We remember him, particularly. His triangle, Scarpa's fascia, ganglion, etc., derive their names from Antonio Scarpa (1742-1832), Italian anatomist.

We remember this man for more than one reason. Colles' fracture is named after Abraham Colles (1773-1843), of Dublin, the leading Irish surgeon of his day.

Since the beginning of recorded history, medical science has always opposed any interference in the relationship between doctor and patient; but now the prospect of socialized medicine threatens to break into the relationship.

When the Seventy-Sixth Congress of the United States convened on January 3, one of the greatest and gravest problems it will be called upon to consider will be that of the proposed National Health Program. Seeking the establishment of compulsory health insurance covering every person of the nation, the proposed program well may be the target for one of the bitterest battles in medical and social history.

A committee of the House of Delegates of the American Medical Association says recently "our committee is not willing to foster any system of compulsory health insurance. Your committee is convinced that it is a complicated, bureaucratic system which has no place in a democratic state. It would undoubtedly set up a far more reaching tax system with great increase in the cost of government. That it would lend itself to political control and manipulation there is no doubt.

"At the meeting of the House of Delegates, Dr. Irvin Abell, president of the American Medical Association, has not opposed insurance against the costs of sickness, of disability, of unemployment, of old age or of death. He does not oppose any interference by any outside agency—commercial, governmental or otherwise—into the relationship between doctor and patient which is fundamental in good medical care."

"Yet, at the annual meeting of the American Public Health Association which was attended by 4,000 experts in public welfare and industrial service, the National Health Plan being formulated by the Federal Government was unanimously indorsed.

"Adding to the bitterness of the fight between the Federal committees and the American Medical Association over the matter of compulsory health insurance, is the investigation by the Department of Justice of the Association on a charge of alleged monopolistic practices and violation of the anti-trust laws. The Justice Department claims that the Association, the Medical Society of the District of Columbia and some officials of both had attempted to prevent operation of the Group Health Association, Inc., a cooperative organized by Government employees to provide themselves with prepaid medical care "at a cost which the members could afford to pay." The matter is now before a Federal Grand Jury, and indictments have been returned."

The President of the United States in a recent message to Congress says, "All of us want better provision for our older people—for the medically needy we must provide better care—we must find ways to end factional labor strife."

Arrangements for the forty-fourth annual meeting of the Mid-South Post-graduate Medical Assembly to be held at the Peabody Hotel, Feb. 14-17, has been completed,

More than 1500 doctors from all over the Mid-South are expected to attend the meeting, expected to be the largest in the history of the assembly. Exhibits will display latest equipment of medical science and laboratory research. Dr. Lawrence W. Long, of Jackson is the president.

Dr. Clifton Flinn of Monroe, La., and Dr. Will Russworm of Helena, Ark., visited in the county during the holidays, erstwhile citizens of this community.

Dr. and Mrs. C. D. Pritchard of Lambert motored to Florida for the Orange Bowl game and a visit with Mr. and Mrs. Perry Funk at Gainesville. Mrs. Pritchard will be remembered as Vivienne Taylor of Walls, this county, while Mrs. Funk was Martha Jernberg, daughter of Dr. M. B. Jernberg of Tunica County, formerly of this county.

L. L. Minor,
County Editor
Rt. 4, Memphis, Tenn.

LEFLORE COUNTY

Dr. and Mrs. W. E. Denman and family spent the week-end, Dec. 25, visiting relatives in Memphis and Blytheville, Ark.

Dr. J. F. Lucas attended the Ole Miss-Tennessee game in Memphis, Dec. 3.

Dr. and Mrs. A. M. Wynne and daughter, Merigold, were visitors here Dec. 7.

Dr. W. H. Frizell, Brookhaven, visited his daughter, Mrs. H. F. McShane, Dec. 8.

Dr. G. V. Gillespie, Jr., returned from a hunting trip in Louisiana Dec. 8.

Dr. and Mrs. L. A. Barnett attended the meeting in Jackson of the State P. H. Association.

Dr. T. C. Kelly, Sidon, 63, died at the Greenwood Leflore Hospital at 5 a. m., Dec. 11, of cerebral hemorrhage, and was buried in Sidon Dec. 12. He was a native of Alabama, but had practiced at Sidon since 1922. He leaves his wife, a daughter, Miss May of Sidon, and four sons, Will of Baton Rouge, La., and Robert, John, and Carl of Sidon.

Dr. Fred Sandifer, Jr., New Orleans, spent Xmas holidays at his home here.

On Xmas day, Mrs. Dr. E. M. Meek of Glendora, was admitted to the hospital here for an appendectomy. She has been doing well since the operation.

Dr. Meek left Dec. 30 for Ada, Oklahoma, where he has an appointment as resident physician at the Valley View Commonwealth Hospital until July 1. He will then go to Harvard for post-graduate work.

Dr. L. A. Gray, director of the department of epidemiology of the State Board of Health, spent a few days in this county at Morgan City where he completed plans for a survey and treatment program of venereal diseases.

Dr. Geo. Baskerville left for Pasadena, California Dec. 27, to attend the Rose Bowl game. He has a nephew on the Duke eleven. He will return Jan. 6.

Dr. R. E. Wilson attended the funeral of his friend, Dr. John Bullock, Jackson, who died suddenly at that place Dec. 26 of cerebral hemorrhage.

On Dec. 30, at six o'clock, p. m., Dr. J. D. Biles of Sumner gave a bird supper to his friends at his home, which was a most delightful affair. There were doctors present from North Mississippi and Memphis to enjoy the hospitality of the doctor and his two sons, Dr. J. D. Biles, Jr., Memphis, and Dr. Lacy, Sumner; Drs. W. E. Denman, F. M. Sandifer, I. B. Bright, and W. B. Dickins were the doctors present from Greenwood.

Dr. I. B. Bright has moved his office from the Bright Bld., to the Medical Building on Fulton St.

Greenwood, Miss. W. B. Dickins,
Jan. 2, 1939. County Editor.

Interpreting Medical Literature

PATHOLOGY AND CLINICAL PATHOLOGY

E. T. White, Greenville

CANCER OF CERVIX UTERI

Karl H. Mertzloff, J. A. M. A. (Nov. 19.) 1938

The cervix is the most common location of cancer in women, 27% of cancers in women occur in the genital organs and 80 % of genital cancer is in the cervix.

When examination shows a suspicious lesion in the cervix, we should endeavor to establish the presence or absence of cancer as soon as possible, and not subject the patient to a long series of treatments to see if the lesion will clear up because it is the early diagnosis that offers the best chances for cure.

The author discusses four methods of examination: Close inspection with proper light, the Schiller iodine test, the colposcopic examination and biopsy. Of these methods, inspection and biopsy are the most reliable for the average physician.

The Schiller iodine test is based on the fact that normal epithelium contains glycogen and stains a reddish brown color, whereas cancer tissue does not take the stain. Other conditions that affect the staining reaction are leukemia, small epithelial gland plugs, superficially situated nabothian follicle cysts, areas of epithelial loss, epithelium with an underlying inflammatory process and particles of adherent inspissated secretion together with other unexplained causes.

The colposcope is expensive and requires loss of time for making a thorough examination. and an experienced operator is required to interpret correctly what one sees, so for the average physician the colposcopic examination is not a satisfactory method of examination, but in experienced hands, this form of examination is of undoubted value.

The biopsy is probably the method of choice in making the diagnosis of early carcinoma. It is very important that the biopsy be properly taken for the most reliable diagnosis. The biopsy should be a rectangular block including material from the suspicious area and a generous amount of adjoining normal appearing tissue. The specimen should be put in formaldehyde or other fixing solution immediately. If taken and prepared in this way there is little doubt about the direction the block should be cut and the highest percentage of correct diagnosis will be obtained. Minute fragments of tissue, wedge shaped pieces of tissue and material obtained by scooping out tissue with the endothermy loop may be entirely satisfactory.

January 5, 1939.

ORTHOPEDICS

Thomas H. Blake, Jackson

A RECONSTRUCTION OPERATION FOR PSEUDARTHROSIS AND RESORPTION OF THE NECK OF THE FEMUR

J. Vernon Luck, Iowa M. Soc. (Dec.) 1938

This is an excellent article which gives a great deal of hope to those unfortunate patients who have received a fracture of the neck of the femur that has resulted in a non-union. The older methods of treating fractures in this locality even under the best of circumstances resulted in only about fifty per cent union, the other one-half having difficulty in walking as a result. In cases where the head of the femur has not undergone an aseptic necrosis or where there is little arthritis of the hip one is justified in attempting a reconstructive operation.

The operation described consists of making a slightly modified Smith-Petersen incision, the fracture site is exposed and all scar tissue removed. The adhesions are removed from the head of the femur. The greater trochanter with its muscle attachments is removed and the upper shaft just above the lesser trochanter is severed transversely and then placed beneath the freshly prepared head, which, of course, is in the acetabulum. The greater trochanter with its muscle attachments is then transplanted downward on the lateral surface of the femur at about the level of the lesser trochanter. A nail or pin is then headed through the greater trochanter, shaft and into the head. After closure in layers a cast is then applied. In some cases where the fixation is firm it is unnecessary to add any external appliance.

The recommendations for this operation are:

Very little surgical shock.

Restoration of good mechanics of the hip.

Bony union.

A stable painless joint with only a small amount of shortening of the extremity.

Comment: Unfortunately many physicians offer a patient nothing when a non-union has resulted in a fractured hip. There is a great deal that can be done for these patients, especially, those who are not senile and are in good health. The operation described is an excellent one and should be encouraged in more cases.

January 5, 1939.

GYNECOLOGY AND OBSTETRICS

J. F. Lucas, Greenwood

VAGINAL HYSTERECTOMY: Averett Leonard, *Am. J. Obst. and Gynec.*, 35-987 (June) 1938. —Vaginal hysterectomy is not popular in the United States except by a small group of surgeons who have perfected the technic and who have had an opportunity to observe the advantages of this method as compared with the abdominal method.

There have been many articles purporting to show the advantages of total abdominal hysterectomy over subtotal. Von Graff is quoted as having collected 1200 cases of cancer of the cervical stump following subtotal hysterectomy, of which 66 % have been reported in the last twelve years. Richardson also has been quoted as having unpublished data from the Johns Hopkins Hospital Clinic which has revealed that 940 cases of cancer of the cervix, 2.3 % were stump cancer. The indication for hysterectomy in fully two-thirds of these cases were fibroids.

It is emphasized that the general belief that destruction by cautery or coming out of the cervical canal as a prophylactic measure against the development of stump cancer is erroneous, especially as 80 % of all cases of cancer of the cervix originate from the sqaumous cell epithelium of the portio vaginalis. It is also found by statistical study that 20 % of the cases develop cancer who have been hysterectomized for pelvic inflammatory disease. This calls our attention to the fact that chronic infections of the cervix may have a possible role in the etiology of cancer.

Those who advocate subtotal hysterectomy claim a lower mortality and morbidity as compared to the total, while those who advocate total hysterectomy claim that in expert hands the mortality and morbidity is not any greater and that the elimination of the possibility of cervical stump cancer make it a more advantageous operation. This latter claim is supported by Fullerton and Faulk's statistics which included 1851 abdominal hysterectomies (total and subtotal) with a mortality rate of 7.5 %. Ten hundred and seventy--eight of these were total hysterectomies, of which 63 % were performed by the visiting staff with a 3.5 % mortality, and 37 % by the resident staff with a mortality of 5.2 %.

An interesting compilation for a five--year period was recently made by Dr. Q. U. Newell at a meeting of the Southern Medical Association. This included 14,280 supravaginal hysterectomies with a mortality of 1.2 % to 7.9 %.

It is felt that vaginal hysterectomy, as well as accomplishing everything claimed for the total abdominal hysterectomy, offers the following advantages (1) lower mortality and morbidity; (2) diminished tendency to peritoneal infection or shock, therefore, more suitable for poor risks; (3) in the treatment of hemorrhagic conditions of the uterus in middle-aged women, the mortality rate is as low as that of radium without the possible sequelae and relapses, and also malignancy is more readily disclosed and eliminated by vaginal hysterectomy; (4) convalescence is not complicated by gastro-intestinal disturbances and the patient may eat the following day; (5) the risk of central hernia and postoperative adhesions is nil; (6) adequate drainage is more easily secured; and, (7) providing the bladder is properly freed and elevated, there is less risk of injury to the bladder or ureters.

Babcock reports 300 vaginal hysterectomies with no deaths; Heaney reports 627 with a mortality of 0.47 %, and Kennedy reports several thousand cases with a mortality of 0.2 %. In this series of 348 cases there were no deaths. There are appropriate tables giving (1) the age incidence (majority between 40 and 49); (2) the indications, of which fibroid headed the list with 193 cases; hyperplastic or fibrotic uteri with excessive bleeding at the menopause, of which there were 68; prolapse, of which there were 51; fibroids associated with endometriosis; ovarian tumor; pelvic inflammatory disease as well as fibroid with fixation to the anterior abdominal wall make up 27 cases; the remainder for other conditions which included badly lacerated cervices. A third table presents the additional operative procedures; 296 had, in addition, posterior colpoperineorrhaphy; 62 either unilateral or bilateral salpingectomy; 42 either unilateral or bilateral oophorectomy; 26 preliminary episiotomy; and 23 had a plastic on the urethra for incontinence. The remainder had minor surgery such as Bartholin cystectomy, repair of inguinal hernia, etc.

The pre-operative complications were as follows; 61 had hypertension; 42 secondary anemia (below 60 %), of which 16 required transfusions; 18 had chronic nephritis; 16 chronic myocarditis; 5 diabetes, 4 valvular heart disease, and 3 had arrested pulmonary tuberculosis. One patient had three transfusions before surgery was attempted.

Postoperative complications which were responsible for pyrexia for one or more days were as follows: 32 due to wound infections, 19 to cystitis, 8 to femoral thrombophlebitis, 3 to bronchitis and 2 to tonsillitis.

The technique employed in the majority of cases (172) was by ligature alone, while 62 were by clamp and ligature, 76 using the Mayo modification and 38 using the Kennedy clamp method. The average hospital stay was 14.6 days. Spinal anesthesia was used in 312 cases, gas and ether in 36.

In the entire series there was no incidence when the vaginal had to be abandoned to complete the procedure by the abdominal route. Fibroids which reached above the umbilicus were removed by the vaginal route following the technique of morcellation described by Dr. Babcock. Vaginal hysterectomy is a less formidable procedure as is determined by its effect upon the patient.

Comment: The numerous reports of such excellent results appearing in the literature following vaginal hysterectomy convinces us that it is a procedure of great value and is worthy of more extended use than it receives in many clinics today. It is a procedure that should be attempted only by the gynecologically trained surgeon. Its indications should be kept within logical limits. If there has been a preceding pelvic inflammation with adhesions to the bowel or omentum, if there are large adnexal masses or if the fibroid is very large it probably would be best to attack these cases from above. A master of gynecological surgery like Babcock, Heaney or Kennedy could take out almost any kind of uterus through the vagina but the man doing only a few cases should limit his indications.

January 5, 1939.

NEURO-PSYCHIATRY

Charles D. Mitchell, Whitfield

EARLY SCHIZOPHRENIC, E wen Cameron, *Psychiatrist,* 95 (Nov.) 1938.—

In this paper the author has presented an investigation of a series of one hundred patients suffering from schizophrenia who were admitted to the hospital for the first time. The study has been confined to the early manifestations of the disorder as it occurred in adolescents and adults. This study was made primarily to find those symptons that presented themselves early so that these patients might be hospitalized at an earlier date than that usually used, which is anti-social behavior and marked conduct disorders. The findings of this investigation may be given briefly in the following two tables:

TABLE I

Non-Specific Early Symptons

Terms used by relatives to describe patient's behavior. Synonymous terms in parenthesis.

ELEMENTS OF A HYPERACTIVE PATTERN

Nervous (restless, tense).
Sleeplessness.
Worried (uneasy, apprehensive).
Nightmares.
Hypochondriasis.
Somatic Complaints.
Moody.
Impatient.
Tantrums.
Fault-finding.
Moralizing.

ELEMENTS OF A HYPOACTIVE PATTERN

Seclusive (withdrawn, quiet).

Day-dreaming.
Preoccupied.
Loss of friends.
Irritability.
Loss of interest (of ambition).
Depressed.
Lack of energy (slump in work).
Lack of concentration.
Fatigue (weariness).
Poor appetite.

TABLE II

Early Specific Schizophrenia Symptoms

Group I

Ideational Responses

Talked about
Watched.
Doped.
Fears of violence.
Ideas of disgrace.
Ideas of redemption.
Supporting hallucinations.

Group II

Somatic Experiences

Dazed.
Dizzy.
Lack of feeling of familiarity.
Odd Somatic Experiences.

Psycho-Somatic Responses

Screaming and giggling spells.
Tantrums.
Failure to cooperate in eating, talking or moving.

COMMENTS:

The value of these early symptoms of schizophrenia has been more than doubled since the advent of the new shock treatment of schizophrenia. The earlier the schizophrenic patient is treated the better the results with shock treatment. These symptoms as presented in the above two tables should be of great value to the general practitioner in making his diagnosis of mental disturbances prior to the unfortunate onset of anti-social behavior such as assaultiveness, homocidal tendencies and suicidal tendencies. It appears very evident at this time that the solution to the schizophrenia problem is one of early diagnosis where mental hygiene may be used to prevent the onset of the psychosis and early treatment instituted for those who have just reached the psychotic stage.

January 5, 1939.

RADIOLOGY AND ROENTGENOLOGY

Karl O. Stingily, Meridian

THE IOWA EXPERIMENT IN CANCER CONTROL, Arthur W. Erskine, *Roentgenology and Radium Therapy*, 40:903, (Dec.) 1938. — Erskine's splendid paper deals with the problems of cancer control in Iowa. In 1935 there were 3,245 deaths from cancer. Of these he believes 1,200-1,500 could have been saved by educating laity and physicians to adequate and early treatment. From 70 to 90 per cent of early breast cancers are curable by courageous adequate treatment. Cancer of the lips and skin have diminished to a minimum already under this plan. A cancer commission has been established to plan on cancer control and this committee has furnished every physician in Iowa a set of simple and practical rules for minimum standards of diagnosis and treatment of cancer.

Dr. Erskine feels confident that they can reduce the death rate of cancer in a few years.

COMMENT: Dr. Erskine is known throughout the country for his tireless efforts in cancer control. I wish each physician in the State could read this original article. In population Mississippi and Iowa are almost equal. In area they are almost equal. Our populations differ somewhat, but our death rates of cancer are practically the same, Mississippi a little higher.

I feel our State Association should appoint a cancer committee to work along the same type of work as that of Iowa. Our job would be harder due to the negro population and smaller income groups, but our reward would be greater. I do feel the physician should be refreshed in cancer education. Then the job of lay education would be easier. A little effort on our part will reap wonderful good.

Meridian,
January 5, 1939.

PEDIATRICS

Harvey F. Garrison, Jackson

SULPHANILAMIDE IN THE TREATMENT OF GONORRHEAL OPHTHALMIA IN CHILDREN, Merrill W. Michels, *Pediatrics*, 13:527 (October) 1938. —The author of this article, realizing the close relationship of the gonococcus to the meningococcus, started the use of sulfanilamide in cases of gonorrheal ophthalmia. He included only cases of proved gonorrheal origin, determined by direct smear of the conjunctival scrapings or by culture on chocolate agar media. He made a comparative study with cases treated over a two-year period to the use of sulfanilamide as controls. These cases or the ones treated by local means only had repeated positive smears and were treated as follows:

1. Warm boric irrigations sufficient to keep the eyes free of discharge; irrigations were carried out every thirty minutes or more often as needed and decreased as the discharge diminished.

2. Instillation of antiseptics; argyrol, 20 to 25 per cent, was used every three or four hours after the irrigation.

3. Ice compresses were used only in cases with marked swelling and tumefaction of the lids. Care was used to avoid corneal maceration that accompanies the prolonged use of cold. Premature infants did not receive such treatment.

4. Silver nitrate, 1 per cent, was used in patients with marked spasm or corneal involvement.

6. Special measures, as external canthotomy and conjunctival flaps were carried out as the case demanded. A group of four patients received foreign protein therapy in the form of sterile milk.

7. Daily eye smears taken, and when three consecutive negative smears were obtained the clinical examination giving support, the patient was removed from the isolation to the ophthalmia ward.

"The control group consisted of 32 patients with an average hospital duration of 28.5 days. Four patients had corneal involvement, two going on to perforation. Eighteen patients had involvement of both eyes. There were 20 white patients and 12 negroes. Of the entire group, there were seven illegitimate children. There were no positive serologic findings in the entire group (many of the Kahn tests, however, were taken in children prior to the third month of life). Of 18 females, six had positive vaginal smears. The ages of the patients varied from 1 day to 10 years.

"Four additional patients were treated by sterile milk with an average hospital duration of 16.5 days; of these, none showed corneal involvement.

"The children treated with sulfanilamide had an identical local care as outlined above, except that silver nitrate was not used. Sulfanilamide was given on the approximate dosage basis of one grain per pound body weight daily, combining it with equal amounts of sodium bicarbonate. The drug was incorporated in karo water feedings with smaller infants with no difficulty encountered by this mode of administration. Older children were given oral administration; one resistant child was gavaged. In no instance was parenteral administration found necessary. Sulfanilamide blood level determinations were made acaccording to the method of Marshall. The levels found were much lower as a group than with older children on a similar dosage basis. Blood levels taken in the morning after a nocturnal period with no drug administration were uniformly low. Levels taken during or within a few hours after a day's administration were higher.

"Fifteen patients were treated with sulfanilamide with an average hospital duration of 5.8 days. The ages of the patients varied from five days to three years. Of these, two showed corneal involvement; perforation did not result after sulfanilamide was started. Six of the group showed bilateral involvement. There were seven white and eight negro patients, seven females and eight males.

"None of the complications attributed to sulfanilamide was observed in this group; no appreciable acidosis or cyanosis was observed. No cases showed a morbilliform rash; no nausea or vomiting was encountered."

"The most satisfying observation in the use of sulfanilamide in the treatment of gonococcic ophthalmia was the rapid increase in the swelling and discharge. Patients with red, chemotic, bulbar conjunctivae, with swollen retrotarsal folds and tumefied lids showed a uniformly prompt subsidence. Since this type of case is more apt to have implication of the cornea, if untreated, the rapid arrest noted with sulfanilamide is responsible for a much better prognosis."

The writer believes that "the use of sulfanilamide is warranted in the treatment of gonorrheal ophthalmia for the following reasons:

"1. Economic importance, sharply reducing the length of hospitalization.

"2. The ease of administration.

"3. The apparent lack of complications.

"4. The rapid improvement found.

"5. The general increase in the comfort of the patient."

COMMENT: From an experience in pediatric practice for many years, it is evident to my mind that gonorrhea in babies and children is more prevalent to-day than ever before, and it is very natural to suppose that gonorrheal ophthalmia is also more prevalent. The author's suggestions as to the local and the systematic treatment by sulfanilamide are such that can easily be carried out by most any physician. I am asking that this abstract be presented in "THE MISSISSIPPI DOCTOR," for this month, because I believe that this is a most valuable treatment, and one which will do a great deal of good, if properly carried out.

Jan. 7, 1938. Jackson,

EYE EAR, NOSE AND THROAT

Alston Callahan, Vicksburg

STATUS OF IONIZATION IN NASAL ALLERGY

French K. Hansel discussed the above subject in a very thorough manner before the American Congress of Physical Therapy. Hansel is probably more familiar with literature on nasal allergy than any other man and his paper contained many references to the reports of others.

While many investigators had previously reported using this method of treatment it was not until Warwick developed his ionization apparatus that it attracted much attention. Since then this field has been the subject of vigorous investigation.

The reports of relief obtained vary with the investigator. For example, Ramirez reported uniformly unsatisfactory results from ionization of 100 cases of seasonal hay fever and 25 cases of allergic rhinitis. On the other hand, Alden reported the results of several rhinologists; in 416 cases of uncomplicated hay fever, complete relief was reported in 63%; 75% of the cases were estimated as receiving 80% relief or better; and only 8% were failures. Hansel reported 2 of his 20 cases (10%) developing a complicating acute suppurative maxillary sinusitis. He strongly advises against this procedure during an acute rhinitis.

He discussed two tenable theories as to the mechanism of relief: "Satisfactory results appear to be the effect of a local or even a general non-specific disensitization; or improvement is due to a shrinkage of the tissues from prolonged constriction or paralysis of the blood vessels rather than shrinkage from fibrosis."

The paper includes a comparison of the results obtained by treating allergic patients with ionization and with the usual allergic methods of elimination and desensitization. Apparently his own experience and the weight of the literature favor the latter. Among his conclusions, he states; "It is generally concluded that ionization in nasal allergy should be confined to those cases in which allergic methods of treatment have failed to give satisfactory relief of symptoms."

We heartily concur in this conclusion. Experience has taught that those cases that are frankly allergic usually respond satisfactorily to elimination and desensitization; in the writer's experience, ionization has not been nearly so satisfactory. Cases of vasomotor rhinitis that are not allergic are usually benefited by ionization; the literature indicates that perhaps equally good results are obtained by the use of escharotics.

While it must be admitted that the allergic method of treatment of hay fever and allergic rhinitis is not entirely successful, better results are obtained with it than by any other method now at our command.

January 7, 1939.

HOSPITAL STAFF TRANSACTIONS

CALENDAR OF HOSPITAL STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASSOCIATION, Tenth Annual Session, Gulfport, May 8, 1939.

Aberdeen Hospital: Third Monday, each month, 7:00 p. m.

Anderson Infirmary: First Friday, each month, 6:30 p. m.

Biloxi Hospital: First Thursday, each month, 7:30 p. m.

Bramlett Hospital: Third Wednesday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 12:00 noon.

Field Memorial Hospital: Second Thursday, each month, 6:30 p. m.

Gilmore Sanitarium: Third Thursday, each month, 8:00 p. m.

Greenwood-Leflore Hospital: First Thursday, each month 6:30 p. m.

Grenada Hospital: Second Tuesday, each month, 6:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month. 7:30 p. m.

Holmes County Community Hospital: Second Thursday, each month, 7:00 p. m.

Houston Hospital: Last Thursday, each month, 7:30 p. m.

Ivy Hospital: First Monday, each month, at 7:00 p. m.

Jackson County Hospital: Second Thursday, each month, except July and August, 7:00 p.m.

Jackson Infirmary: Last Tuesday, each month, except three summer months, 7:00 p.m.

King's Daughters Hospital, Brookhaven: First Tuesday, each month, 7:00 p. m.

King's Daughters Hospital, Greenville: First Wednesday, each month, 7:00 p. m.

King's Daughters Hospital, Gulfport: Third Thursday, each month, 8:00 p. m.

King's Daughters Hospital, Yazoo City: First Monday, each month, 7:30 p. m.

Macon Hospital: First Tuesday, each month, 7:30 p. m.

Magee General Hospital: Twenty-fifth each month, 7:30 p. m.

Mayes Hospital: First Monday, each month, 2:30 p. m.

McComb City Hospital: First Tuesday, each month, 6:00 p. m.

McComb Infirmary: Second Thursday, each month, 7:00 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Mississippi State Hospital, Vicksburg: Third Tuesday, each month, 7:00 p. m.

Natchez Sanatorium: Second Tuesday, each

month, 7:30 p. m.

New Albany Hospital and Clinic: Second Tuesday, each month, 8:00 p. m.

Newton Hospital: Second Thursday, each month.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Oktibbeha Hospital: Last Thursday, each month, 7:30 p. m.

Oxford Hospital: Last Monday, each month.

Pontotoc Clinic: First Tuesday, each month, 7:30 p. m.

Rush's Infirmary: First Friday, each month, 7:30 p. m.

Scott County Hospital: Third Wednesday, each month.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

Tylertown Hospital: Second Thursday, each month, 7:00 p. m.

U. S. Veteran's Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:30 p. m.

GREENWOOD LEFLORE COUNTY HOSPITAL STAFF

At the regular meeting of the staff of the Greenwood Leflore Hospital at 6:30 p. m., Dec. 1, a nice turkey dinner was served. After attending to the regular business, and reading of reports, the following deaths which occurred during the month were discussed: a case of intestinal toxemia in a baby, with intussusception, by Dr. J. F. Lucas; Dr. G. Y. Gillespie, Jr., reported a case of left side hemiplegia, the third stroke in an old man.

W. B. Dickins

Greenwood,
January 2, 1939.

IVY HOSPITAL STAFF MEETING

At the meeting of the Ivy Hospital staff in January, a proposal by the Farm Security Administration that tenants be treated or administered on a contract insurance basis was rejected.

Members of the staff in attendance were: Dr. F. P. Ivy, Dr. F. C. Spalding, Dr. J. E. Ellis, Dr. A. K. Naugle, Sr., Dr .L. W. [illegible]son, and Dr. G. A. Campbell. Others in attendance were: Dr. J. A. Stewart, Dr. R. P. Abbott, Dr. B. N. Joiner, Dr. A. K. Naugle, Jr., and the following visitors: Dr. M. Q. Ewing, Amory; Dr. F. B. Long, Starkville; and Dr. Hunter Scales, Jr., Starkville.

Dr. Rush B. Abbott, D. D. S., West Point, read a paper on "Oral Diagnosis and Infection."

Dr. J. A. Stewart spoke on "Pastoral Psychology," placing the influential spirit over matter from early antiquity to present day, in a very delightful manner.

"ORAL DIAGNOSIS AND INFECTION"

Rush P. Abbott, D. D. S., West Point

In presenting to you these most talked of subjects I am doing so that we may again be reminded of the great responsibility that confronts us as members of the dental profession. When we are visited by a patient, the very first thing to be considered should be the matter of diagnosis, because our failure in this part of our duty may mean continued ill health—yes, even death.

Oral diagnosis deals with both healthy and unhealthy conditions of the oral cavity, also the recognition and differentiation of normal and abnormal conditions of the dental organs and the surrounding tissues. When your diagnosis has been made, decide on the prognosis and the manner of treatments—operative or medical. A thorough study of both normal and abnormal tissues, particularly histological, physiological, and pathological, should be mastered if we expect to accomplish the most for those who have entrusted themselves to our care for relief. Another very important procedure is at all times to take into consideration the anatomical relations surrounding the oral cavity, namely, antrum of Highmore, nares, inferior dental canal, dental foramen, salivary glands and their ducts. Especially is this true when operative procedure is necessary. A further consideration that should never be overlooked in reaching a definite conclusion is the general health of the individual, including his daily habits. In other words, get a complete history of the case. The following is a copy of a history-sheet I use in my own practice:

HISTORY

Name. Date. Case No.
Address.
Age. Sex. Weight
Occupation. Name Physician
Blood Pressure. Systolic Diastolic.
General Physical Condition.
Organic Trouble, if any.
Complaints.

ORAL DIAGNOSIS.

General Condition Mouth and Mucous Membrane
Condition Gums.
Abnormal Conditions.
Condition Third Molars.
Non-Vital Teeth.
Teeth Absent.
Radiographic Findings.
    Malformations.
    Roots.

Cysts or Granulomae.
Abscesses.
Cavities.
Operations.
Date. Conditions Found.
Follow-Up Record.

As little as you may realize, this or similar methods of record increases the patients' confidence ten-fold, because they know that you are interested in more than just a mere hole in a tooth, thus placing you on a little higher plane than they did before.

The armamentarium necessary for examination consists mainly of mouth mirror, explorer, tongue depressor, probe, pliers, and sponges. These, of course, must be sterile. Make use of the x-ray for full mouth examination. Careful consideration should be given to the condition of the following: gums, peridental membrane, foul breath, teeth, alveolar process, maxillary sinuses, tongue, palate, floor of the mouth, throat, salivary glands, and their ducts and various forms of growths.

In dealing with infection we are particularly interested not so much in the various types but in the methods of locating it and the eradication, because most of us are not in a locality accessible to a bacteriological laboratory for such examinations, which are most desirable in many, many cases. We know that the three types, streptococcus, straphyloccocus, and diplococcus, are common, each of which is harmful, but sometimes one is about as harmful as the other under certain conditions. In our daily practice as we meet conditions, it is necessary at all times to be on the alert lest we fail to live up to the highest professional standards in executing our full duty to the patient, the profession, and possibly to the one who has referred the case to our care for the diagnosis and elimination of the pathological disturbances found. When you think of the systemic diseases that are directly traceable to the teeth, gums and surrounding tissues, and jaws, according to a most reliable source, then our profession must think, observe, and act accordingly if we are as conscientious as any man should be if he has at heart the well-being of those who have trusted us for relief.

I am not here to try to teach you bacteriology and pathology. You have had sufficient training to comprehend this all-important subject as far as we are concerned, but my chief aim is to encourage everyone to realize the grave responsibility that confronts us from a health standpoint—the professional side of dentistry and your responsibility to the public.

It has been said, said now, and for many years to come it will be said by both medical and dental men when infection is found: "You have some infection but not enough to cause you trouble." As a matter of fact, the statement may not be false, but it is either false or ignorant because millions of bacteria can pass through the eye of a needle each day and we know not what organ will be the victim—and ultimately result in untold suffering and even death.

To sum the whole matter up—look at all times for infection and abnormal conditions, and when found, so advise the patient. He wants the truth, and if you do not care to make the correction, tell the patient where to go for relief. You will be the winner and not the loser.

Carl Lucas of Los Angeles has made extensive bacteriological examinations of tissues surrounding the impacted third molars, and in each case found infection present. Now if this is true, I am sure it is, knowing Dr. Lucas as I do, then for the good of the public do not pass these conditions up when found without telling the patient. When a patient has periodontal lesions, tell him so—matters not whether you treat him or not—you should do something about the situation.

Much has been said about medical men making dental diagnoses, and even directing the operative procedure. This is all dead wrong and should not be tolerated. Another thing, both medical men and the laymen make use of the x-ray for dental diagnosis. We have our responsibility, likewise they have their responsibility.

VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Tuesday, January 10, and after a supper served at 6:30 p. m., was called to order by the president, Dr. R. A. Street, Jr., with fourteen members and two guests present. The program included:

Reports from the Records Department and Analysis of the Work of the Hospital.

Special Case Reports

1. Obstructing Duodenal Ulcer—A Street.
2. Ulcerative Colitis with Autopsy Findings —Dr. G. C. Jarratt. Discussed by Drs. A. Street, L. S. Lippincott, H. H. Johnston.
3. Eclampsia with Recovery—Dr. R. A. Street, Jr. Discussed by Drs. George M. Street, W. E. Johnston, G. C. Jarratt.

Cancer Clinic For Discussion

1. Carcinoma of Omentum (grade IV)—Dr. A. Street.

Report of Vital Statistics—Dr. F. Michael Smith, Director of Warren County Health Department.

Demonstration of Selected Roentgen Ray Studies—Enlarged mediastinal glands; enlarged thymus; sarcoma (metastatic)) lungs; right renal calculus; vesical diverticulosis.

THREE MINUTE REPORT OF THE LITERATURE OF THE MONTH

1. Dr. A. Street—Ligation of Common Carotid Artery.
2. Dr. L. S. Lippincott—Hodgkin's Disease and Brucellosis.
3. Dr. L. J. Clark—Food Allergy In Gastro-Intestinal Tract.
4. Dr. R. A. Street, Jr.—Diet in Pernicious Vomiting of Pregnancy.
5. Dr. H. H. Johnston—Benign Tumors of Larynx.
6. Dr. W. E. Johnston—Atoms In Medicine.

The next meeting of the staff will be held Friday, February 10, at 6:30 p. m.

Eclampsia With Recovery

Dr. A. Street, Jr., M.D.

Patient: White, female, age 22, primipara, first seen in the clinic May 27, 1938. Last menstrual period Feb 24, 1938.

Past History: Not remarkable.

Family History: Not remarkable.

Examination: Uterus enlarged to size of about eleven to twelve weeks pregnancy. Pelvic measurements ample. Serology negative. Urine normal. Blood pressure 145-80; no anemia.

Treatment: One-half strength compound cathartic pills twice weekly and advised regarding general diet.

Subsequent: The pregnancy was uneventful until October 24, when blood pressure jumped to 150-105. Complained of feeling nervous and noted spots before the eyes with slight vertigo. Urinary output was diminished. She was hospitalized for two days, with rapid improvement on a low protein salt free diet and Epsom salts daily. Careful ininstructions were given regarding the continuation of this diet, and she was given one-half strength cc. pills twice a week with one-half ounce of Epsom salts every other morning. The blood pressure did not climb again until November 1, when it was 150-110, and the urine showed a trace of albumin. November 15, blood pressure was 160-115 with a large trace of albumin, but patient felt well. Admitted to the hospital and put on the same diet with one grain of calomel every p. m. and one ounce of Epsom salts every a. m. In spite of this, the blood pressure remained 150-110 and she continued to run a trace of albumin in the urine, although the urinary output was good and the blood chemistry was normal.

November 21, it was deemed advisable to induce labor, since the size of the baby had increased to the point where we thought the viability would not be endangered. Patient had a very difficult labor, necessitating frequent hypodermics or morphine and hyoscine for rest, combined with interval stimulation of the contractions by giving small doses of pitocin. Blood pressure ranged from 160 to 180 systolic and 115 to 130 diastolic. Several injections of hypertonic glucose solution were necessary when the blood pressure became high. About 7:35 a. m., November 22, there was a convulsive seizure, lasting about thirty seconds. Immediately taken to surgery and given 10 cc. of 20% magnesium sulphate in the vein, preparations were made to deliver the baby with forceps, the cervix being completely dilated and the head on the perineum. Following the delivery, stimulation with adrenalin and caffeine was necessary because of the very marked depression following the intravenous magnesium sulphate, blood pressure dropping down to about 90-60. 1000cc. of 10% glucose was started immediately, which helped the condition considerably. Meanwhile the repair of the perineum was completed. Blood pressure was still low following the glucose and stimulation was continued to overcome the depression from the magnesium sulphate. Around 12:30 p. m. patient was again given 1000 cc of 10% glucose in the vein and her general condition was much better and her blood pressure improved. Urinary output continued to be satisfactory and, aside from some depression noted through the night and a very rapid pulse, which was weak at times, patient seemed to feel very well, being in a state of partial coma for about 16 hours after delivery.

Convalescence following this stormy state was very good, patient noting at times rather severe headaches during the first four or five days, and stating that her vision was quite blurred. The course was very smooth from then on. The perineorrhaphy healed nicely up to about the eighth day when one of the silkworm sutures pulled through the skin and left the external portion of the episiotomy open, but this granulated up very nicely and at present is completely healed.

I neglected to state that examination of the fundi, both before and after delivery, never showed any evidence of hemorrhage, and showed only some slight papillo-edema and congestion of the vessels. Blood pressure is at present 140-90 and all symptoms of the toxemia have cleared. Specimens of urine show no albumin. Uterus forward and free. Cervix had a slight erosion for which it was necessary to cauterize.

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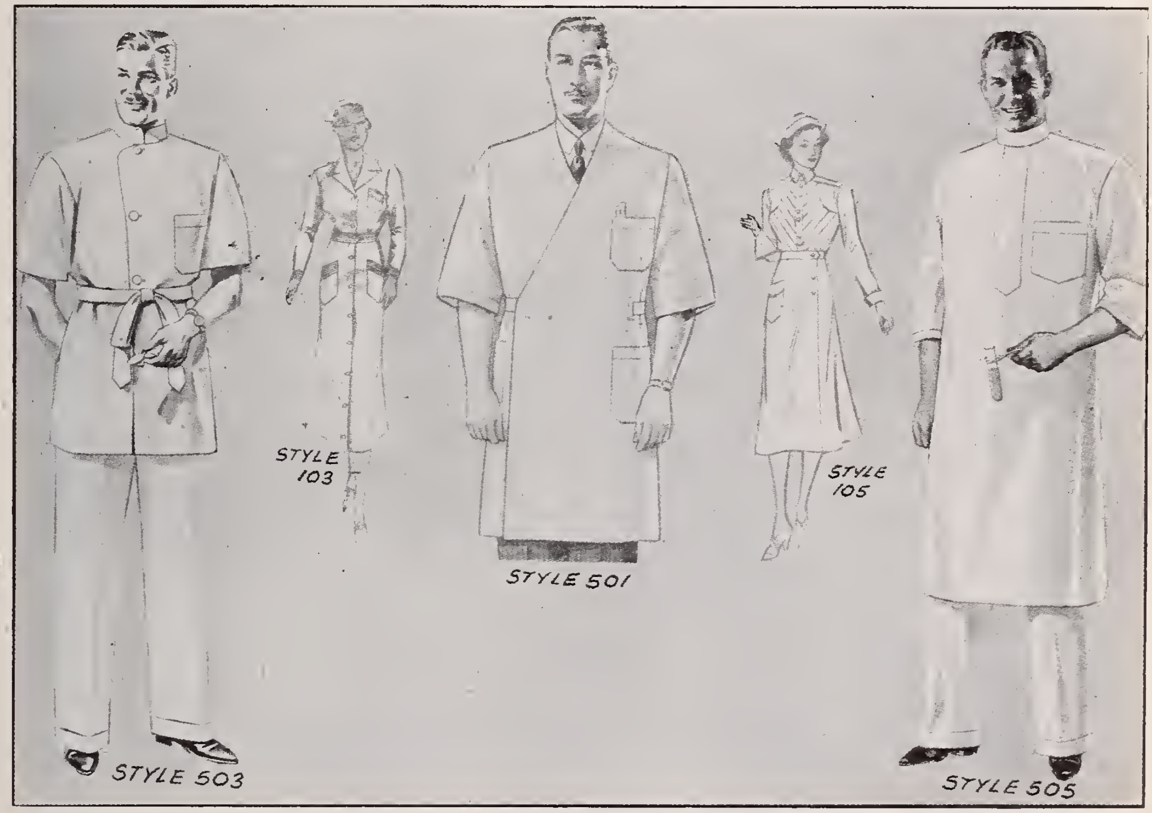

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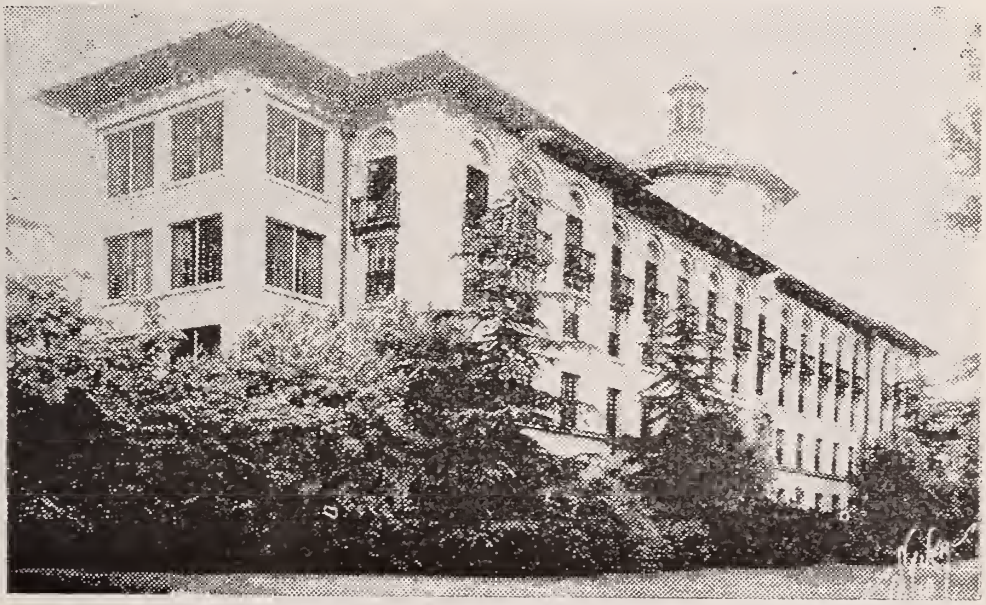

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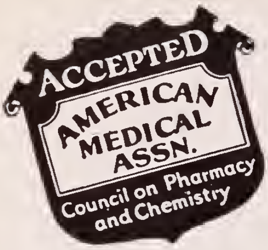
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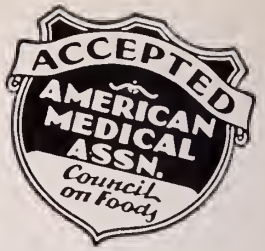

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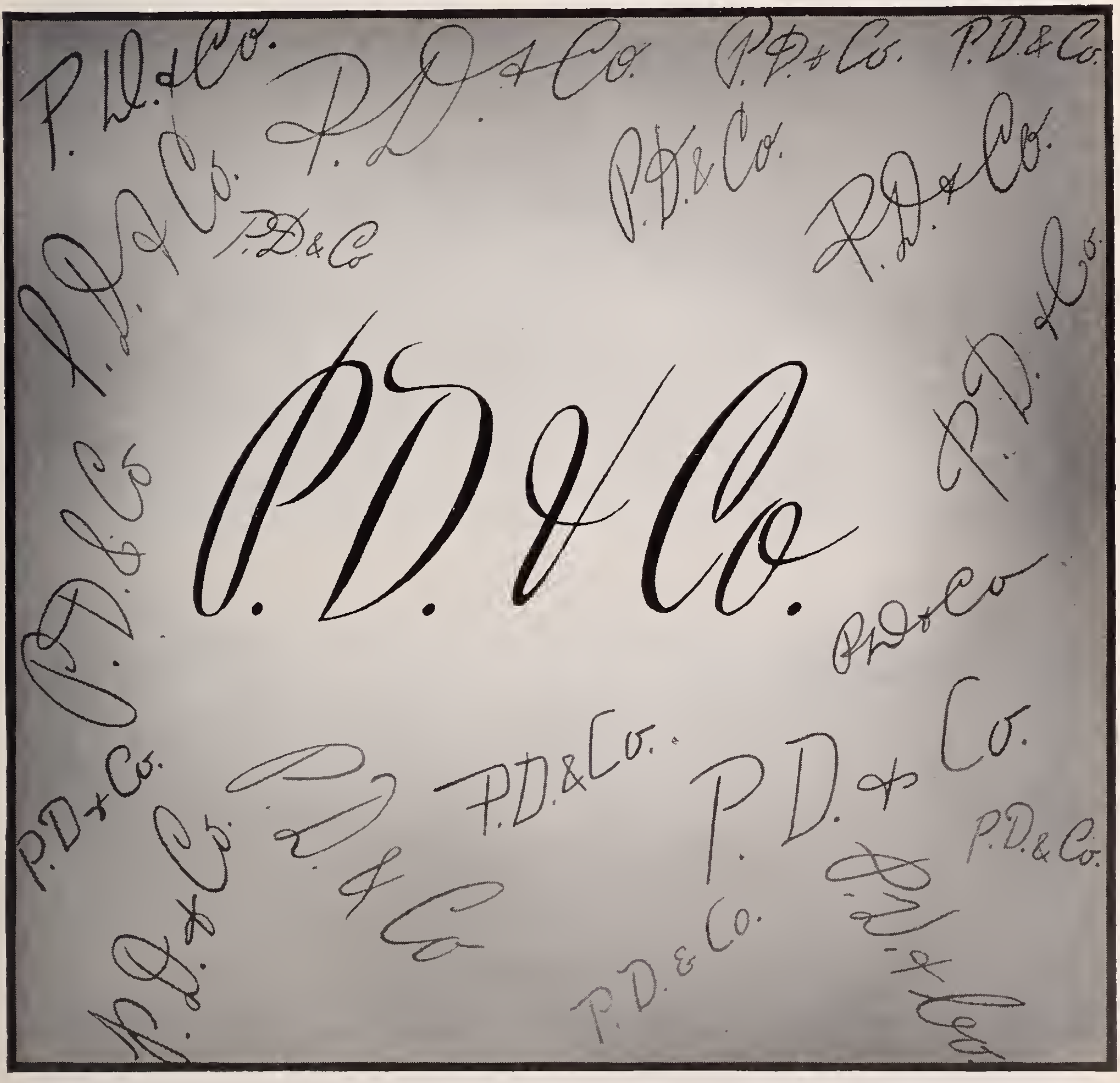
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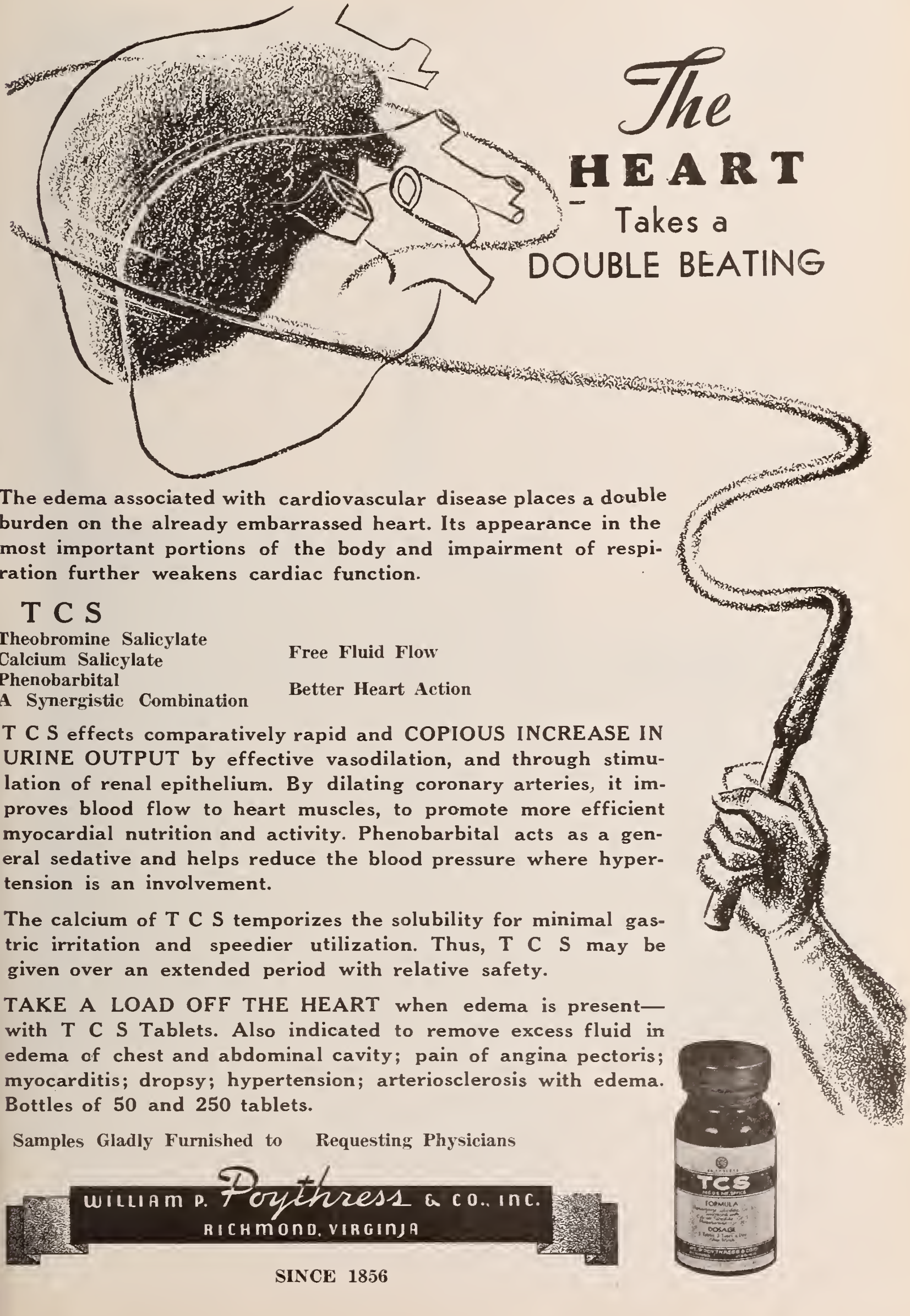

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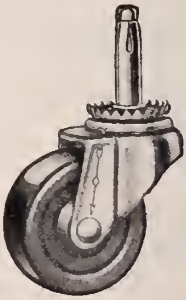

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The Pathological Gall Bladder; What Causes It And What To Do With It*

ANTHONY BASSLER, M. D., LL. D., F. A. C. P.
NEW YORK CITY

Most gall bladder conditions arise from the blood being surfeited with food, the blood not being hungry enough, and consequently the converted proteins and carbohydrates in the small intestines become toxic and acid. Thus the portal stream becomes more toxic and this overwhelms the liver. The condition continuing, bacteria mount into the upper levels of the small intestine bacterializing the jejunum and duodenum, which should be sterile. Finally the Kupffer cells in the liver become disturbed, the cement substance edematous and cell infiltrated, the liver goes into partial dysfunction and bacteria pass through the liver into the bile stream further reinfecting the small intestine and all this eventually disturbs the normal body metabolism. What happens in the gall bladder is only part of a complex disorder process.

Failures of cholecystectomy curing gall bladder conditions is acknowledged. In a careful follow-up on stoneless gall bladder after cholecystectomy, Kunath had a seventeen per cent stormy postoperative course compared to seven per cent in the stone cases; greater tendency to post operative distension, nausea and vomiting; twenty-six per cent of cure, while in the stone cases it was eighty-five per cent; in twenty-five per cent the gall bladders were normal histologically; that hepatitis, cholangitis and pancreatitis do not explain the failures; and cure of dyspepsia in thirty-three per cent and production of dyspepsia that had not existed before the operation in thirty-eight per cent. Careful follow-up of a large series of cholecystectomies for cholecystitis in our New York hospitals briefly is: fifty per cent cure and improvement; in the stone cases seventy-two per cent cure or improvement, twenty-eight per cent no improvement or worse; and ninety-two per cent of colic in the gall stone cases. There are no figures of follow-up from five to twenty years after operation. If there were, in the stoneless gall bladder there would be about ninety per cent still stick people.

The triology of cholecystitis, cholangitis and cholelithiasis are all due to the same condition. The different pathologies are sequential to one another, a reactive pathology which becomes chronic. My cases followed up over five years of time and treated medically as we have believed wise this far, show that only about ten per cent are still well and ninety per cent still sick, yet about eighty per cent of all three were perfectly satisfied and felt better at the time of the active treatment. There is nothing in medicine that shows more hoodwinking of the medical man in his therapeutics, the patient to him and the patient within himself, than the present day medical therapeutics of gall bladder disease. No diagnosis of gall bladder conditions should be made without a careful history, physical examination (the two most important of all) cholecystography, examination of duodenal returns, careful urinalysis and blood chemistry and a worthwhile bacteriologic and chemical examination of the intestine in the feces and upper levels of the gut, and no cure should be standardized on relief of symptoms alone and short of at least a year's careful biochemic and metabolic check-up — five years is better. The nutritional, neurologic, digestive and mental symptoms that these people have are also due to this complex disorder in which physicians who only look at the gall bladder are only trying to see all of the room through a keyhole.

The intestinal acid-bacterial cause of this condition can be proved by the laboratory in ninety per cent of all types of cases, and I believe exists in the other ten per cent too. In abnormal biotoxic bowel conditions three out of every ten cases have disease of the gall bladder although there may be no symptoms of it, and in nine out of ten that present themselves as gall bladder cases, the bowel condition can be proved and in these, three out of ten have gall stones.

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*Read at the meeting of the Mid-South Postgraduate Medical Assembly, Memphis, Tenn., Feb. 16, 1939

After checking my results of the usual handling of gall bladder diseases over years of time up to 1928, I learned that I had taken a lot of money from people and done a huge amount of work all to little permanent avail in ninety-one out of every hundred cases, and I now feel that perhaps a hard working job on a farm would have given better therapeutic results than had been accomplished with me up to that time. An intensive study of 100 cases was made in 1928 and 1929, the whole scheme of treatment was changed beginning with 1930 and now during the last eight years I have raised my ability to handle these cases from nine per cent of cures to sixty per cent and these have been studied by every known method of examination. In thirty-two per cent more (all of whom think they are cured) careful study did not confirm this although marked improvement was claimed. This leaves seven per cent in which operation was definitely warranted. The cures and improvements should also include, in addition to the gall bladder, the commonly present syndrones of carbohydrate indigestion, and those of catabolic, enteric and neurologic groupings. The removal of a diseased gall bladder will cure the intestinal cause that produces it or the hepatic catabolic result no better than the removal of a prostate will cure a chronic urinary infection or the removal of tonsils and teeth cure an atrophic arthritis.

Prevention and cure of a disease is predicated upon knowledge of its etiology, the factors which operate with it, and the measures known for their control. Biliary stasis and infections are believed to be responsible for the production of disease of the gall bladder. Neither one or the two together can be taken as sufficient. Logically these two are more significantly due to a disturbed physiology and are produced secondary to this. Plainly then, the understanding and treatment for these disorders lie in the factors that produce them, factors which are of primary importance and which receive but little attention today. The books on gall bladder have basically two main omissions. They represent the gall bladder as a thing apart from the body as a whole, and their etiology and treatment puts credulity to a test beyond the pale of wisdom and logical thinking. Graham and his associates estimate that twenty-four per cent of adult population have gall stones; and Crump from post-mortem statistics found that practically sixty per cent had some form of gall bladder pathology and Mentzer reports sixty-six per cent in 612 routine necropsies. While these figures are higher than can be proved clinically, they do issue a challenge to the attitudes of etiology, diagnosis and treatment of today.

The liver is the most important metabolic organ in the body and in its metabolism of carbohydrates, proteins, fats, bile secretion, vitamin storage, detoxication, bacteria destroying, conjugation and blood forming is intestinal in supply. It is unreasonable to make sharp separation functionally between the stomach, pancreas, intestine, liver and biliary apparatus because they are interrelated, they effect the body and the body as a whole affects them. But, other than fats, whatever goes into the portal system goes into the liver, and bacteria and toxins from the upper levels of the small intestine can overwhelm it and then the biliary system becomes hit, chronically, if kept up long enough.

There is no more erroneous assumption than that magnesia sulphate relaxes the sphincter of Oddi; oils, glucose, peptones do it quite as well. Anything thrown into the empty duodenum reflexly raises the pressure in the biliary system and the tonicity of the Oddi sphincter is overcome. This pressure in fasting is about 100 mm. of water, and is raised to 200 or 300 mm. when foods or substances stimulate the duodenal mucosa. In the intestinal condition about to be mentioned, the sphincter usually is spastic and may require 500 to 800 mm. of water to overcome it, thus biliary stasis. The bile then darkens, gets thick and crystals result, and even gall stones form. The value of medical bile drainage in its effect on the gall bladder at best is very nominal. Its most direct benefit is mental. Mainly its benefit is indirect by purgation of the upper levels brought about by throwing stimuli into the duodenum, which starts the bile, pancreatic juice and duodenal secretion to flow. The value of "removal of units of infection from the gall bladder" is a myth since the bacteria recovered are mostly from the duodenum. For those who depend upon medical bile aspirations alone, I have no brief. If about ten per cent of permanent benefit is the idea of the depths of medicine in this subject, it is not for me to criticize. But they who believe in the efficacy of medical bile drainage must not let their enthusiasm obscure the fact that no matter how many bile aspirations, they are leaving a high per cent of ill people after them. A clinical study of the cases that had been cholectomized years ago is all that is necessary to prove this.

Carbohydrate indigestion is nothing more than the saccharobutyric toxemia of Herter's classification. The process begins with an anaerobic infection in the ileo-cecal valve region which parasitizes the aerobes in the small intestine causing them to mount higher and higher, and when they are present and culturizing in the jejunum and duodenum, the pH turns to the left and hepato-biliary dysfunctions are set for pathologies to ensue. One then sees three changes: (1) a spasmogenic aptitude involving the sphincter of Oddi, hyperperistalsis in the small intestine and spasms in the colon; (2) an increase and then a decrease of gastric and the other digestive secretions; and (3) catarrhal, congestive and inflammatory changes in the duodenum, enteron and colon. These are present in the average gall bladder case. The dynamo is in the gut, the electricity sparks all over. We then array a lot of conditions and call them carbohydrate indigestion, various hyperesthetic conditions in the stomach, catarrhal states from duodenitis to colitis, vague diarrhoreas, hepatitis, gall bladder pathologies, a vast array of nervous and mental symptoms, essential hypertension and changes in the arteries, heart and kidney disease, and the intestine significance is lost in the different entity terms that now classify the disorders. But the gut condition that cracked the whip originally is still there, even though different kinds of specialists have cracked the patients' pocket books on the way along. Nobody pays any attention to histamine, a highly toxic substance which proceeds from dephenolization of histidine in the presence of formic acid with the gram negative organisms in the small intestine, to the continued phenolemia and indoxylemia, to positive intestinal bacteria blood taps, or the biochemistry of the small and large intestine. Nobody studies the side shows of spastic, secretory, catarrhal and congestion factors in the digestive tract, or the catabolic phenomena of increase of oxalic acid, ammonia, and uric acid in urines, increased urobilin, hypercholesterinemia, increased icterus index, abnormal blood chemistries, sugar intolerance, distortion of carbon dioxide combining power, etc. What are gall stones made of, with the exception of bacteria in them which passed through a damaged liver? They are composed of cholesterol and bilirubin-calcium, the first because of deficient bile secretion to keep the crystals in solution, and the second because of a catabolic condition in the body in which the liver is not concerned, but which by way of the mucous membrane change in the gall bladder and ducts, sufficient calcium is added to make its formation out of the bile possible.

Because of disturbance in buffer salts of the body, crystalline substances are deposited in the excretory tracts, salivary glands, kidney and prostate. For this reason the gall bladder should be considered more of an excretory organ than one of function. Gall stones are not manufactured because of diseased clumps or detritus. The interior of gall stones is a hollow or a fluid and the crystalline formation proves that gall stones are made according to the law of Liesegang of colloidal chemistry. No doubt stones are formed from external effects upon colloidal substance rather than from the center out. Many times gall stones are found present in perfectly normal gall bladders. It must be evident that the spiral valves of Heister of the cystic ducts would interfere with the exciting of any solid bodies contained in the gall bladder, and in this connection it is interesting that no matter how many stones are contained in the gall bladder they are always of the same chemistry. The calcium bilirubinate stones are probably formed in the ducts and most of the stones in the common bile duct are those of calcium bilirubinate. It is interesting here that with these stones 60 per cent of them show the presence of B. coli and for this reason it is probable that they are due to an infection of the biliary duct tree together, of course, with a disturbed chemistry of the body. It is significant that gall stones planted in a normal gall bladder of a dog show that they are dissolved and one not uncommonly sees gall stones with erosions. After cholecystectomy the presence of common duct stones does not prove that they had been left behind because there are many instances where these stones are constantly forming in the bile duct. The significance of gall stones is not totally a surgical affair and surgeons should realize this when they remove them—they are removing a resulting status of affairs and not an original, abnormal condition. Whatever the diagnosis, after the teeth, tonsils, sinuses, and pelvic organs have been examined for infections, we say, well maybe the gall bladder has something to do in this? And then when it's tender, the left lobe of the liver is enlarged, the B fractions contain crystals, pus, muco-pus and the x-ray is positive, we all exclaim here is the rascal, and we give it attention and scientifically the case gets no better or very little so. Then maybe we take the gall bladder out and we find a pathologic gall bladder of the chronic type or the short chain streptococci of Wilkie in the walls and cystic gland in the acute case, and yet the individual can be proved still not well. In every illness obscure in type or etiology, the patient is entitled to a careful biochemic examination of the upper levels of the small intestine and purged specimens of feces. When this gut condition is present we can get positive taps in sixty per cent on the first tap and thirty per cent more on the second to fourth.

Most of the gall bladder cases are in females who are far more instabilized endocrinologically than males. The female is more susceptible to metabolic changes and catabolic phenomena than males. The role of the thyroid, pituitary and gonads as regulators of cholesterol metabolism in both the blood and bile is important. Increased cholesterol is not as symptomatic of gall bladder disease as it is of a metabolic disturbance. Jaundice with liver change is common in hyperthyroidism (thyroid crises). Cholesterol and uric acid are destroyed in the small intestine by the intestinal organisms. The fact that bile salts are diminished in biliary tract pathology does not change their aspect as products of body metabolism and only that disturbance in the liver interferes with their manufacture or elimination. In this gut condition, the alkali reserve becomes overwhelmed or exhausted, liver and body conjugation becomes deficient, and hyperacid gastric juice, stools, urine, saliva and sweat are produced. The CO_2 combining power lowers, the plasma chloride increases, the magnesium and calcium lower, and the calcium-phosphorus ratio is disturbed. The mechanisms of hydrolytic-oxidation reduction and electrolytic disassociation, gycogenitic functions, hormonic or nerve control back of fat utilization and conversion, colloid and protein metabolism and conversion, demineralization, avitaminosis, interference with water exchange. All are disturbed. One has but to observe the break down of general health in the old gall bladder case years after it has been removed for the eye's mind to see this and that the liver, influenced in function from the small intestine, was the greatest initiator of it all.

The fermentative acid stools, high in anaerobes, cholecystography, the blood-phosphatase, hippuric acid, galactose, and bilirubin tests, elevated blood sugars, diagnostic bile drainages, are important in the diagnosis. But the duodenal tube in the third part of the duodenum or jejunum with a positive culture of aerobic organisms is of the most signal importance. To me, the diagnosis of gall bladder involvement is mostly an affair of a complete and exhaustive history, a carefully done physical examination and a logical laboratory examination. The diagnostic values from examination of x-ray and examination of duodenal returns are not complete enough. One often sees a non-filling and slowly emptying gall bladder with positive crystalline returns, and yet at operation and tissue study the gall bladder is perfectly normal. In the absence of duodenal taps the careful examination and evaluation of stools, urine, and sometimes blood findings are also valuable. The etiological significance however is the positive bacterial return from the lower duodenum or upper jejunum.

TREATMENT

Intestine

This should be predicated upon three aspects, the intestine, the gall bladder and liver, and the general body; and attention to this triology is important, the intestinal being the most essential. The diet should be high in native proteins with green vegetables and salads that are low in starch and sugar values. By keeping low in starch and sugar, the micro-organisms in the upper part of the small intestine have less nutriment for them to work on and this also inhibits the anaerobes in the ileo-cecal region. The more these lower anaerobes are controlled, the freer and less paracitic are the aerobes in the upper levels of the small intestine. The liver in these cases is dysfunctionally hit but generally not enough pathologically so that a high protein diet is not well tolerated or dangerous, and, by reduction of the portal stream toxicity, the liver functions recuperate. After a month or so the diet can be more open, but excess of food intake or hypercaloric values should be regulated down to just barely body and work requirements.

Fats may be employed to stimulate bile flow, not as solid foods, but in various liquids as vegetable oils, these best taken before meals. As to diets to influence hypercholesterolemia they are occasionally valuable, not to benefit the gall bladder but the catabolic state for the time being. The diet should also be gauged on reduction in the overweight (as most of these individuals are) or built up in the underweight. The best plan in general is to diet for the intestinal state irrespective of anything else. To diet specifically for the gall bladder state alone is about as valuable as dieting for a brain tumor.

At the start, the lower duodenum should be tubed, with or without stimulation, and a return for bacteria recovery secured. This specimen should be cultured on Conradi-Drigalski, Krumweid, endo and sugar agar and the Gram-negative organisms obtained. If the case had an attack of acute cholecystitis, heart-infusion agar should be used also in an attempt to get the short chain streptococci of Wilkie, and this may be used with the first run in the vaccines. Ordinarily no acute attacks have been present and thus no attention is paid to streptococci or staphlococci which are largely secondary invaders from the blood stream. In these instances search for focal infections elsewhere in the body and their treatment are important. The bacteria are made up into concentrated vaccines or antigens and used intradermally biweekly for several months. No one can evaluate this biological therapy but I feel that its routine is worthwhile. One sees here all the way from striking results to no calculable improvement and apparent failure. One can never predict, so give the patient the benefit of the doubt for a while at least.

The next item is to control the anaerobes in the right colon, because with these controlled, the bacteriology in the upper levels of the small intestine is also. For this purpose daily instillations of oxygen into the colon or daily enemas of 4 to 12 cc. of Javell water in 2 quarts of warm water are used, the latter best in the knee chest position. Since the anaerobes are controlled by most of the strains of B. coli, bi-weekly instillations of from 10 to 30 trillion viable B. coli can be injected into the colon by way of the anus. For further information in concentrated intestinal vaccines, B. coli instillations and the use of oxygen and Javell water, I respectfully refer you to some of my former writings.

Castor oil is toxic to these people, but small doses of calomel or phenolthalein are not, these being the only drugs that purge the small intestine. It has been proved that small doses of the higher metals favorably influence the bacteriology of the small intestine. For the purpose I use a tablet composed of colloidal iron 15 mgm, colloidal manganese, 2 mgm, combined calcium 34 mgm, phosphorus combined 26 mgm with 75 Sherman units of vitamin B_1 7½ units of vitamin G (B_2) and 250 U.S.P. units of vitamin D. Remember vitamins are important for liver function, therefore their addition.

GALL BLADDER

Medical bile aspirations may be used two or three times a week, but it is far better not to bother with them but to give transduodenal lavages with hypertonic saline solution using from a quarter to a liter of solution to wash the small and large intestine clean. These are given twice a week for about a month. Since many of these cases have a chronic gastritis, the practice I employ is to pass the tip of the duodenal lavage into the stomach, wash this with soda bicarbonate solution when it is hyperacid, and normal saline when hypoacid or achylic, then let the tip go through the pylorus and then follow with the transduodenal lavage. If bile aspirations are done they should be preceded by gastric and followed by transduodenal lavages. Not much attention need be paid to crystals, muco-pus shreds, etc., in the bile returns. These usually disappear in a few weeks.

In all cases, including the operative failures, these gastric and intestinal lavages are kept up actively for several weeks. In the occasional case where the duodenal tube is not tolerated, a neurosis should be suspected and Epsom Salts well diluted in warm water can be drunk before breakfast in the mornings.

If there is pain or tenderness in the gall bladder or liver, the hot steam pad for an hour twice a day can be used. There is no objection to short wave or diathermia.

When the external secretion of the pancreas is low careful watch should be engaged in, retestings made and cholecystectomy advised if restitution does not take place. As the intestinal and metabolic states improve, the rule is for the pancreatic state also to improve, which can be helped by pancreatic feedings for a while. When stones are found only by the x-ray and there have been no clinical symptoms of their presence, the case may be carried on with medical treatments, but should symptoms occur, operation is in order.

You will observe that I have said nothing about medicines for the gall bladder. In the last five years there have been 127 drugs and combinations advanced for the treatment of gall bladder cases. When there are as many sorts of medical treatments, do not let the pharmaceutical houses that sit up nights scheming new things and printing lurid and graphic advertisements of them, fool you. The liver above and the small intestine below are two huge physiological planets with dozens of direct and interrelated functions. They are joined together by the portal and bile streams. I ask you, how can a drug or combination of them be of benefit to these especially when there are a lot more physiological functions we do not know about? I care not who the person is, what the drug, the medical journal that advances it, or the drug house selling it (and this includes the Kethochloric acids), one is only spending the patient's money foolishly and that's not honest. If there is psychological help from taking medicines, the mineral vitamin tablets mentioned will do or some inexpensive gall bladder pill may be used. The one you used twenty-five years ago is just as good as any of the remedies today. The simplest and best medicine I know of today is the taking of a tablespoon or two of 50 per cent magnesium sulphate solution 15 minutes before breakfast, and a tablespoon or two of olive oil before retiring.

METABOLIC OR GENERAL

The treatment of the catabolic condition is most desirable. For laxation I am kindly disposed to Carlsbad Sprudel Salts or Squibbs' special Epsom Salts, with abundance of water before breakfast. At least five glasses of tap or alkaline water are ordered for each day in addition to other fluids. Warm carbonate of soda baths followed by dry blanket sweating or light cabinet sweats are used three times a week. The most valuable results come from physical exercise in the open. Each one of these people must walk for an hour, or three miles, each day taking deep breaths on the way. Specified morning and evening exercises with warm water drunk before and after are encouraged. Many of these women have bad feet and cannot walk much. Orthopedists are often useful here and pool swimming is helpful for the time being. By increasing the oxydase in the body and whipping up liver and digestive functions by outdoor exercise and fresh air and sunshine, one is often surprised to see quite definite gall bladder symptoms disappear in a few days' time. The windows are kept open nights and the day is routined by meals at regular hours, periods of mental and physical relaxation late afternoons, and definite and regular hours of sleep are advised. Since the human being is as happy as he or she has made up his or her mind to be, some questioning and advice on this is in order. In menopausal women one of the estrogenic products may help along and small doses of thyroid are also of assistance.

As the intestinal condition improves the gall bladder symptoms and those of the general body improve also. Active treatment should be kept up for at least a month and may be then modified according to the case. Even though the patients are free from their gall bladder symptoms they should be checked by x-ray and laboratory for several months. They must be proved to be well dispassionately, not just their statements taken as proof.

The main message I wish to leave with you is that in gall bladder pathology we deal with an intestinal state in which the conditions in the liver, gall bladder and body are all of them associated and sequential. This bacteria-toxic gut condition is the most important item of treatment, yet this is not being diagnosed, not understood, or being properly handled. As the gall bladder, liver and ducts may display the resulting syndrome, so they may also be enteric, neurological, mental or catabolic even though the usually present hepato-biliary pathology does not positively manifest itself. We have had a lot of half-baked science, partial consideration and assumption in this whole matter. We really have here a very curable condition. It is just up to us to handle it better than is being done. Do not consider the gall bladder case as cured when you take the gall bladder out. One-half of them apparently are but if you follow them long enough and study them carefully enough nine out of ten will show that they still need medical attention. Demosthenes said, "Success has a great tendency to conceal" and in nothing of medicine is this more true than in gall bladder cases.

Chronic Deficiency States With Special Reference To Subclinical Pellagra

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BY THE TERM chronic deficiency states is implied a condition which, as result of inadequacy of certain essentials in the diet, a group of symptoms arise. More comprehensive terms are nutritional diseases, deficiency states or avitaminoses but these expressions suggest at once a clear-cut, definitely sketched picture of a disease state which presents almost invariably certain characteristic features. Thus such a disease as xerophthalmia is a very definite entity which can be recognized almost at a glance; beriberi has certain pecularities, when full blown, which the veriest tyro in medicine can recognize. On the other hand, there is a group of patients, or perhaps it might properly be said people, who have many irregular, bizarre and unusual expressions of disease, or functional disorders, which when properly analyzed are found to be the result of an insufficient ingestion of some or all of the food elements which are necessary for proper growth, proper physical development and proper functioning of various internal organs. At times it may be that only one or two of the vitamins or minerals may be absent in such quantities as to result in complaints of many kinds but as a rule if the diet is inadequate or substandard in one particular, mineral or vitamin, it is likely to be inadequate in all. Sometimes only one mineral, iodine, may not be supplied to the organism in quantities sufficient to have the thyroid gland function as it should, or it is possible that other minerals may also be lacking in amount enough to insure good health.

As Sodeman and I have recently written, in the four-footed animal this inadequacy of diet may be dependent upon: (1) inadequate supply in the environment; (2) inability to use the supply of food-stuff available in the environment; (3) a disturbance interfering in the ability of the organism to choose from the environment the proper substances. Paraphrased for man this may be construed to mean: (1) insufficient amount of food because of poverty or because of the unwillingness to eat a properly selected diet because of a desire to be thin or to maintain leanness; (2) inability to make use of certain vitamins on account of disease, most frequently in the gastrointestinal tract; (3) the self instilled factor of unwillingness to pick out proper foods because of dietary pecularities or habits in eating.

A proper dietary demands: (1) adequate caloric intake. If the caloric intake is insufficient it is quite possible that that particular individual who is not eating enough is not getting the proper food constituents; (2) adequate supply of protein which supplies energy and provides tissue building substances; (3) water; (4) minerals, most of which in food are present quantitatively ample to insure an abundant supply but there are a few which if the diet is limited may not be obtained in large enough quantities to supply the body, and (5) vitamins. In addition to these well known elements of the normal diet it has been found also that certain fatty acids are necessary for physical well being.

PROTEIN REQUIREMENTS

Every physician is acquainted with the fact that in making up the diabetic diet the protein requirement is estimated as a gram per kilo of body weight. However, it is often forgotten that the body requirements of protein have to be met in elaborating a diet for an individual, for example, who has hypertension or who has chronic nephritis or who for some other reason is put on a limited protein intake. Lack of oral protein results in a lowered serum-albumin content which in turn may result in the development of edema. In certain instances, as nephrosis, where large amounts of albumin are excreted from the body, then the protein requirement must be stepped up measurably. As an example of the edema

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*Read at the meeting of the Mid-South Postgraduate Medical Assembly, Memphis, Tenn., Feb. 16, 1939 that may appear in a person, apparently entirely well, is my experience with a young dietitian who, for some reason or another, because she was supposed to have gall bladder disease was told to avoid all proteins. This young woman followed the doctor's advice literally. When I saw her some eight years ago she had a pronounced and severe edema which handicapped her very much in her work. She was told to eat in the next six hours a dozen eggs. The resultant flow of urine was more than copious, it was almost a flood. By the next morning the edema had disappeared completely. She has never had a return of the edema since that time.

Although this was an outstanding case and really quite remarkable, nevertheless I have had patients who come into Charity Hospital with slight degrees of edema which disappear when they are put on a diet which contains more protein than they have been getting. Of course the removal of the edema cannot be attributed solely to raising of the albumin-globulin of the blood plasma, but in checking quite a considerable number of these patients it has been found that they do have a low blood protein content and that this reduction undoubtedly bears some relationship to the presence of an edema which in a normal healthy person even with the same degree of lowering of the blood protien would probably not cause edema. I think it is quite essential that we as physicians do not force too strongly the usual conception that animal proteins, be they red meat, white meat or eggs, are very harmful to the person who has hypertension or who has nephritis. My usual plan is to let these patients have protein equivalent to about ½ gram per kilo of body weight.

MINERALS

Minerals are absolutely essential to the human body in order to carry out many if not all of its functions. They are absolutely a necessity in order to maintain a normal pH and to obviate the development of excessive acid or alkalinity. They are primarily and intimately associated with cellular function. It is impossible to conceive of a central nervous functioning without phosphorus and, of course, without constant calcium supplies to the body bone changes would speedily result. Anemia would develop without an adequate intake of iron. Most of the minerals are so richly present in the ordinary foods that a deficiency is almost inconceivable. On the other hand, iodine, calcium, and iron are minerals which are freqeuntly not present in sufficient amount in the diet to insure good health and which often have to be supplied in forms other than of food. In addition to the well-known sodium, potassium, iodine, calcium, phosphorus, iron minerals, there are certain others such as zinc, magnesium, nickel, cobalt, copper and aluminum which are found in the body in small amounts and which must play some role during life—a minor one and an unknown one but certainly a necessary one.

Iodine: Iodine deficiency expresses itself in the adolescent as a rule by development of goiter. This goiter is usually symptomless but it may be the initial disturbance for future trouble from the thyroid gland. Of course everyone knows about iodine in goiter and that in the so-called goitrigenous areas iodine must be added to table salt, drinking water or gotten into the body some other way in order to prevent the development of goiter.

Calcium: This is an extremely important mineral which has to do not only with bone but also with nerve action, blood clotting and helping to maintain as well normal alkalinity of the blood. As is iodine necessary to the thyroid so calcium and the parathyroid compliment each other. Furthermore, there is an interesting relation between calcium and phosphorus which will not concern us now. Unfortunately calcium is a mineral which is not generally supplied by the ordinary diet in quantities sufficient to insure proper growth and development of bones of the growing child. Thus the minimal amount necessary is 1½ gram per diem. This much should be given to the developing child and the lactating woman. A quart of milk will supply this amount but it is advisable to supplement it with foods high in calcium such as eggs and greens as well as figs and filberts.

Iron: Iron has been for generations one of the most common therapeutic agents employed in medicine—rightly so. In spite of the fact that the average person requires only a daily intake of 15 mg. of iron, nevertheless as result of dietary deficiency, of hemorrhage or disease, innumerable patients develop anemia which can be controlled by iron. Nutritional anemia is extremely common and those patients, as in people with anemia irrespective of the cause, have symptoms of exhaustion, fatigue, gastro-intestinal disturbances, menstrual irregularities and so on. These symptoms which are result of hyperchromic microcytic type of anemia may well be controlled by iron. Iron increases the number of young red cells when it is administered in sufficient quantities. This fact is noted even before the hemoglobin is elevated. Iron can be given in almost any form and many are the proprietary preparations of iron and many are the favorite prescriptions of physicians for iron, but given in the simplest form it is just as effective as if given in any fancy form; but it must be given in doses which are very much larger than those given in the pharmacopeia in order to be effective. A daily dose of three teaspoonfuls of crystals of iron and ammonium citrate, 2 to 4 grams of reduced iron or four to six grams of massa ferri carbonatis is a good dose to start with and subsequently reduecd to about half. Other minerals may compliment iron metabolism and make more effective iron therapy but because iron is so cheap there is no earthly reason why it should not be given in large quantities rather than smaller quantities and to which small amounts of copper or germinium have been added.

Sodium and Potassium: These two elements are introduced here merely to bring out certain comparatively recent observations concerning the effect that disease or even physiologic disturbances may have on the body content of these substances. It is not a new observation that excessive sweating is responsible for the tremendous loss of sodium and that so-called heat cramps are directly the result of loss of sodium chloride in the sweat. It has been known only for the last few years that mild degrees of sodium chloride loss may result in fatigue, and physical unhappiness. Thus in our Southern climes a man who is exercising in the summer months may lose a great deal of base and fluid through sweating. He will be pretty well tired out at the end of nine holes of golf, or if he is a working man, after labor in an oil refinery under considerable heat exposure. The taking of two or three grams of sodium chloride will refresh and rejuvenate the golfer or the worker.

Sodium chloride definitely has a role in the treatment of complicated cases of diabetes. Sodium chloride given in large amounts reduces the amount of insulin needed to control the diabetes.

In Addison's disease, Wilder among others has shown that potassium has a harmful effect. The asthenia of the disease has been explained on the toxicity of the potassium iron and its action on muscle fibers. A diet which is rich in potassium occasions loss of appetite, nausea, weakness, sometimes death to a patient suffering from Addison's disease. On the other hand if the potassium intake is restricted to not more than 1.6 gram a day the general condition of the patient is materially improved and this improvement is maintained over a longer period of time than by any other dietetic procedure.

It might not be amiss to mention here a disorder which is supposed to be or actually is conditioned on some pathologic state within the body. To this has been applied the term conditioned deficiency; pernicious anemia is the outstanding example. Here the disease is conditioned upon absence of some product in the gastric mucosa. Other examples of conditioned deficiency are recounted here below: intestinal disorders may result in the inability of the organism to absorb vitamins; severe diarrhea may hurry food elements so rapidly through the intestinal tract that they are not absorbed. Liver or biliary disease in which bile is excluded from the intestine may produce vitamin A deficiency and this when Vitamin A has been fed in really large quantities. Vitamin C may be destroyed by bacteria in the intestinal tract and produce evidence of lack of this particular vitamin.

THE AVITAMINOSES

As stated earlier, it is not my intent to discuss the avitaminoses which are characterized by definite, well-established clinical syndromes which are known to every one, but merely to discuss subminimal vitamin deficiencies in which the amount of carotene, for example, is theoretically adequate but practically in insufficient quantities to prevent certain lesions.

Vitamin A: The daily ration of vitamin A should be approximately 6-8000 International units. If that much is not taken there are certain eye symptoms which may develop, as subclinical expressions of xerophthalmia. Vitamin A should be applied constantly to the retina. It is apparently the precursor of visual purple which is bleached by light to visual yellow with the production of retinene. This in turn decomposes partially in vitamin A but some of it is lost so that there is a demand for a constant exogenous supply.

Jeans and his coworkers found a surprisingly large number of school children with deficiency of vitamin A who did not have such a remarkable condition as blindness but did have poor vision and photophobia, together with, or alone, dryness of the eyes and skin lesions in the nature of keratotic papules over the skin of the arms, legs and shoulders arising from the pilosebaceous follicles. Subclinical vitamin A deficiency may also express itself by diarrhea, anemia, paresthesias, infections such as bronchopneumonia and particularly urinary tract infections. Senile vaginitis may represent a deficiency state.

Very often the administration of cod liver oil, halibut liver oil or percomorph liver oil is sufficient to control the symptoms recounted above, and as a therapeutic test to prove that they are dependent upon a vitamin A deficiency.

Vitamin B: This particular complex is divided into some six divisions which have various purposes to fulfill in human economy. Thiamin, vitamin B, the only vitamin which is known to contain sulphur, is water soluble and heat labile. The absence of vitamin B-1 in quantities sufficient to produce outstanding expressions results in beriberi which pathologically is associated with degeneration of the periphrenal nerves, cardiac dilatation, hypertrophy, tendency to serious effusion and edema. Vitamin B-2 is the vitamin that is associated with the development of pellagra. A discussion of this will be taken up more fully when pellagra is presented.

Vitamins B-3, 4, 5, 6, to which possibly other numbers might be added have to do largely with the effects produced by their withdrawal in the experimental animal. Their exact clinical importance has not as yet been worked out.

The subclinical expressions of vitamin B-1 deficiency are numerous and varied. These people who do not have outstanding clinical beriberi may have, however, pains in the calf muscles or arms. The pains may be more diffuse. Weakness may be quite common. They also have the digestive disturbances which are so common in all the avitaminoses and the peculiarity of this particular deficiency state is a hypotonic and hypomotile condition of the gastrointestinal tract. We have observed patients with latent beriberi who have had cardiac symptoms which are outstanding; tachycardia, various types of mechanistic effects and even sudden death. They may have syncope and vasomotor collapse as well.

One of the interesting developments in the last few years in the study of vitamins has been the demonstration that alcoholic neuritis is not dependent upon the alcohol itself but rather upon the absence of vitamin B-1 in the man who consumes large quantities of alcohol which supplies a good part of his energy requirements. The polyneuritis of pregnancy also develops because of the deficiency of vitamin B-1 and the treatment is satisfactory if vitamin B-1 is administered.

Vitamin C: Cevitamic acid, ascorbic or hexuronic acid, is one of the vitamins that is frequently presented in subminimal amounts only, in the diet. Approximately 1-300 International units (I. U. equal .05 mg of cevitamic acid) are required by the adult. During pregnancy and while the mother is nursing the baby this ration must be tripled or quadrupled. Furthermore, in the young infant it is important to supplement the milk diet with tomato or orange juice. The most outstanding expression of vitamin C deficiency, namely to hemorrhage, is explained by the pathology which is present, namely capillary fragility.

Now the average case of scurvy can be recognized without the slightest difficulty but again to call attention to the disorders which may result from subminimal intake it should be recounted that hemorrhages, notably into the subcutaneous tissues or into the periosteum and into the serous cavities may be seen from time to time. Gingivitis may develop and slight anemia. Lassitude, weakness, failure to gain weight, disposition changes, poor health, dental caries, susceptibility to pyogenic infections may all singly or individually or in combination be present wnen a person is not getting enough vitamin C. In children subperiosteal hemorrhages and increased bone fragility are particularly notable.

Vitamin D: Rickets is very largely a disease which is dealt with by pediatricians, only a word will be said in passing concerning this disorder. It should not be forgotten that occult rickets, due to vitamin A deficiency, may account for a cross and fretful child who sleeps poorly, is restless at night, does not develop physically, whose teeth are slow in coming out and who has digestive disturbances.

In the adult osteomalacia is the analogy of rickets. Here in pregnancy and during lactation the development of a tendency to have bones broken readily, rapidly developing dental caries or even tetany may suggest why this vitamin should be administered. Every one knows that cod liver oil and irradiated foods are indicated in rickets or osteomalacia but it should not be forgotten that these conditions may not be characteristic in their expression and that the growing child and the nursing mother may need vitamin D in one form or another even if they are not obviously rickety or have bone softening.

Other Vitamins: The alphabetic nomenclature of the vitamins is continued well below D. However, with the possible exception of vitamin E which when inadequate is responsible for sterility and abortion, and vitamin K concerned with tendency to hemorrhage, there are insufficient data to warrant an extended clinical discussion of these avitaminoses.

CHRONIC DIETARY DEFICIENCY

I have attempted to indicate that there may be subclinical or minimal expressions of the specific avitaminoses. Here I would like to stress the fact that if one vitamin is absent from the diet in quantities sufficient to produce symptoms in all likelihood all vitamins will likewise be subminimal in quantity. This statement applies not only to the vitamins but also to minerals and other necessary food elements. Bear in mind that although the dietary deficit may be due to poverty, to personal food idiosyncrasies or to unwillingness to eat in order to be thin, in a very considerable number of instances the symptoms that result from a shortage of vitamins or minerals may be dependent upon systemic disease. A very obvious example of this is the anorexia that occurs in tuberculosis. Here the disease is not directly responsible for the insufficient amount of necessary food elements but it is responsible for lack of appetite and hence a quantitative reduction in the indigestion of these food substances. On the other hand, vomiting or diarrhea may act mechanically by ejecting promptly from one end of the alimentary tract or the other the foods which have not had time to be absorbed. Similarly lack of bile which has been mentioned, glandular disturbances and a host of other physiologic and pathologic disturbances within the body may account for the series of symptoms that may arise. Wilbur and Snell have listed the causes inherent in disturbed gastrointestinal function which bring about a deficiency state as: (1) inadequate intake of food; (2) loss of essential secretions of food; (3) lack or decreased production of essential substances, digestive juices, and (4) incomplete intestinal absorption.

The person who is suffering from chronic dietary deficiency is almost invariably thin to the point of malnutrition. This person, where a baby, would be called merasmic. Blood pressures are low, the hands are cold and clammy, subjective and objective asthenia is marked, the skin other than that of the hands and feet is dry, there is muscle irritability or muscle atony, mouth lesions are extremely common. Gingivitis, pyorrhea and stomatitis with glazing may be observed. Interesting to note that keratitis, conjunctivitis and eczematous lesions of the genitals may be the result of combined deficiency of A and B and is only cured when the two vitamins are given together. These individuals are pallid, notably in the palms of the hands. Chilitis is present at the corners of the mouth in some instances.

In spite of the numerous physical expressions of vitamin deficiency they are not likely to occur in any great extent except in the very obvious finding of leanness and the usual concomitant physical expressions of anemia.

These patients are susceptible to infection. They resist disease poorly. Their complaints are numerous, often bizarre and frequently irritating to the family and physician. They are labelled neurotic or neurasthenic or even psychasthenic. Headache or photophobia may be a chief complaint. The ache and pains may not be confined to the head but may be anywhere within the body. Tiredness and the ease of fatigue is a constant complaint. Gastrointestinal symptoms are probably the commonest of any of those referred to any particular organ or system. All kinds of dyspepsia occur and with this dyspepsia there is usually constipation. Muscular twitchings as well as the subjective consciousness of these twitchings, nervousness, insomnia, may also be appreciated by the patient as some of the things that disturb them.

The catholicism of symptoms and the unfortunate inability to pin one deficiency on this syndrome has resulted in polypharmacy so that in the case of the girl with any of these symptoms, if they are recognized as being due to food deficiencies, is conquered by giving two or three or even more vitamins in combination. Most of these preparations are on the market. They have obtained a popularity which is at the present time not exceeded by any other drugs or groups of drugs, luckily they often hit the bull's eye.

PELLAGRA

Pellagra is a disease which has obtained, in the last year, a tremendous amount of popularity both in the lay and the medical press. This is due to the epoch-making discovery that nicotinic acid is practically a specific in the management of disease. As a consequence of this, pellagra cases are being sought out everywhere, special commissions are working on the problem and the individual doctor is administering nicotinic acid, nicotinic acid amide or sodium nicotinate to patients galore. We at Tulane are in the swim and we also are giving nicotinic acid to patients who have abnormal intestinal disorders, who have sore tongues, who have inanition, who have dermatitis, who have diarrhea without any other evidence of pellagra, and with very excellent therapeutic results.

To refer back to vitamin B, it may be said that nicotinic acid is part of vitamin B-2 complex and yet it is not vitamin B-2. It can be isolated from vitamin B as a separate and distinct chemical substance, an organic compound related chemically to nicotine but with entirely different pharmacologic actions. It is not one of the B-1, 2, 3, 4, 5, 6 complexes but is a specific substance itself. The function of nicotinic acid apparently is to prevent inflammatory reactions in the mucous membranes.. It plays a role in coordinating the action of the porphyrins to ultra-violet light. It may have some effect on the central nervous system to prevent degenerative lesions developing in the brain and cord, a far-fetched hypothesis being that it may, when lacking, cause combined sclerosis.

Typical clinical pellagra is recognized very easily but certainly there have been in the past many cases of pellagra, subclinical in character, which were not recognized because the patient did not present the triad dermatitis, diarrhea and dementia. Recently on my ward there has come a group of patients who have a glossitis with anemia, and with porphyrin bodies in the urine. These people would not have been suspected of having pellagra were it not for the fact that we have become pellagra-conscious and administered nicotinic acid to them. The therapeutic test has proved, in many instances, to be confirmatory of the diagnosis that we thought was present. We have had a few patients with diarrhea of unexplained origin. Some of these people have responded beautifully to nicotinic acid, others not as satisfactorily.In one patient we had studied carefully, we could find no cause for the diarrhea, but she promptly returned to normal bowel movements when nicotinic acid was given her. However, sad to relate, in spite of the fact that she was given what we considered a maintenance dose of nicotinic acid, she returned to the ward in about six weeks with a story of having had six or eight bowel movements a day for the last three weeks. Re-checking this patient it was found she had a bacillary dysentery. It is quite possible as result of diarrhea she needed nicotinic acid but this drug was not alone sufficient to control the symptoms of the bacillary dysentery when it became full-fledged. Skin lesions, vaginal lesions, anal lesions have all responded beautifully to nicotinic acid.

Perhaps I am too enthusiastic about the use of this drug in the treatment of people who have certain semi-specific symptoms unexplained by any known etiology. Always when a new drug is introduced it becomes a cure all. Perhaps this will be the history of nicotinic acid. There will be a few well established syndromes which will yield to it and to these syndromes will be given the name of preclinical pellagra but there are other causes for gingivitis or prostitis, for diarrhea or skin lesions and these other conditions will not yield to nicotinic acid. However, it is stimulating, fascinating and intriguing the study that is now being made of the effects of this drug on and in many conditions.

SUMMARY

The innumerable advances that have been made in the study of nutrition in the past few years have opened up a field of investigation and study which is widespread and comprehensive. A very large part of the knowledge that has been obtained has come in the last twenty years. Within the last decade there has been an enormous increment to medical knowledge concerning nutritional diseases. Within the last five years there has been developed a remarkable accretion in the knowledge of vitamins. Every year there have been over 1000 papers indexed on work that has been done in this field. The work of the scientists has been grasped by the clinicians. People are being fed vitamins here, there and everywhere in every conceivable condition. In the course of a few years this dietetic and therapeutic splurge in the vitamins will have calmed down and out of all this work there will evolve a rational and sensible therapeutic procedure in the management of certain disorders, the cause of which has not been known heretofore.

Clinical Manifestations of Vitamin Deficiency States*

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MEMPHIS, TENNESSEE

ALTHOUGH the term "vitamin" is a comparatively recently coined word, it has been suspected for a long time that foods contained something necessary for life and health besides carbohydrates, proteins, fats and the inorganic chemicals. As far back as 1720, Kramer noted the antiscorbutic effect of the citrus fruits and their juices and of green vegetables. The real work which led to the discovery of vitamins, however, apparently began with the investigation of Eijkman, who was employed by the Dutch Government from 1896 to 1901 to study the cause and suggest a cure for beriberi.

During the first of the present century, enormous strides have been made in the discovery, identification and therapeutic uses of vitamins. Several vitamins have been isolated in pure form and their chemical structure determined. Chemists are now able to prepare some of these synthetically. While the physiological action and therapeutic uses of the vitamins are in a more chaotic state, decided advancement has been made along these lines also, and it seems now that within a comparatively short period we shall be able to diagnose with accuracy even mild deficiency diseases and prescribe with precision the therapeutic agent indicated.

New vitamins, or divisions of those previously known into more definite groups, are being discovered all the time, so that what we have to say regarding vitamins today may have to be revised in large measure tomorrow, but according to our present knowledge the best known vitamins have been divided into five groups which have been named from the alphabet as follows A, B, C, D, and E. A few other vitamins have been discovered or suspected, but their identity, source, action, etc., are not sufficiently clear to justify our discussion at this time.

Like all new discoveries in medicine, vitamins are being exploited to an unwarranted degree. Many conditions are being ascribed to vitamin deficiency without sufficient scientific evidence to justify such conclusions. Many pharmaceutical houses are capitalizing on the more or less chaotic state of our knowledge concerning the true action and indications of the various vitamins. We will do well, therefore, to reserve our therapeutic efforts for those cases that have been well worked out to be amenable to vitamin therapy.

Vitamin A

This vitamin is fat soluble and is found in plant foods that are red, such as tomatoes. It is particularly abundant in yellow animal foods —notably, fish liver oils. It is commercially available in cod liver oil and the pro-vitamin, carotene.

Vitamin A exerts its influence particularly on the eye and the epithelium. It is fairly generally conceded, also, that it is necessary to the growth and development of the young.

Extreme deficiencies of vitamin A result in xerophthalmia, a condition in which the eye becomes dry due to atrophy of the conjunctiva and para-ocular glands. It is accompanied by inability to see in dim light and, in profound deficiencies, complete blindness may occur. Associated with the ocular manifestations, the skin becomes dry and scaly. As the deficiency state progresses, pigmented papules, as large as half a centimeter, appear at the site of hair follicles, from which keratotic plugs project. These tend to become infected and pustules develop.

Milder vitamin A deficiencies result in night blindness, perhaps some dryness and scaliness of the skin, and in case of children, arrested growth and development. It should be mentioned that all cases of night blindness are not due to vitamin A deficiency. It may occur as a result of toxic amblyopia, retinitis pigmentosa, detachment of the retina and perhaps other causes.

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*Read before the Clarksdale and Six-County Medical Society, Nov. 9, 1938.

Other conditions which have been ascribed to deficiencies of vitamin A should be mentioned. It has been suggested as one of the causes of hyperthyroidism. The basis of this suggestion was, probably, the apparent antagonism between the action of thyroxine and vitamin A. Experimental data, however, do not seem to establish any very definite indication that vitamin A deficiency has an important etiologic role or that it is a valuable therapeutic agent in thyrotoxicosis. Likewise, it should be said that as yet, we lack sufficient evidence that vitamin A deficiencies predispose to urinary lithiasis, abnormalties of the reproductive system or the cellular elements of the blood.

The relationship between vitamin A deficiencies and susceptibility to infections has received an enormous amount of discussion. It seems that respiratory infections are those which are more generally ascribed to be prevalent in those deficient in vitamin A. This is quite logical, since vitamin A has to do with continuity of epithelium. Experimental data indicate that individuals definitely deficient in vitamin A are more susceptible to respiratory infections than normal individuals, but that intake of vitamin A in excess of the amount required does not increase the resistance of the individual to infection.

The accurate diagnosis of mild grades of vitamin A deficiency is, at the present time, fraught with difficulties. Perhaps the best method devised, so far, is a measurement of deficiency of vision in dim light. This may be determined by the appearance, or failure of appearance, of visual purple in the retina when light is excluded. Since this procedure is not practicable for general use, we must say that we have no accurate and usable means of diagnosing mild deficiencies at the present time.

Vitamin C, the antiscorbutic vitamin, is found in nature in the citrus fruits and their juices, in young and growing lentils and is liberated in the process of germination of seeds. It is obtainable commercially in the form of ascorbic or cevitamic acid.

Vitamin C is necessary for the growth and development of both plants and animals. It maintains the continuity of capillaries and normalcy of structure of bones, teeth, and muscles. The mechanism by which deficiency of vitamin C produces pathologic changes in these structures is through its effect on the intercellular substance, whereby fibrils or collagen is not formed. The manner in which capillary fragility is produced, however, is not so well understood.

The ultimate effect of marked deficiency of vitamin C is the production of scurvy, a clinical entity which is well understood and requires no detailed discussion. It is well known that scurvy is no respecter of persons; that it may occur at any age, in either sex or in any race. Apparently the only necessary element in its development is the absence of vitamin C for the diet. It is quite probable, however, that mild grades of vitamin C deficiencies are more prevalent than have been recognized. It is well known that so-called prescorbutic states, or subclinical scurvy, may easily be produced experimentally in animals and occur in human beings from insufficient intake of vitamin C. In the present state of civilization and with our efficient methods of preventive medicine we rarely see outspoken cases of scurvy. We are, therefore, more interested in the milder forms of vitamin C deficiency.

The first clinical manifestation to appear in vitamin C deficiency is a hemorrhagic tendency. There are two factors which predispose to hemorrhage. one being the increased fragility of the capillaries, a direct result of the deficiency, and the other being mechanical, such as trauma. The condition usually appears first in the skin and in the form of petechiae and these generally appear first on the lower extremities. Since trauma plays a part, it is very frequently observed first, or to a greater degree, underneath shoes, garters, or other irritating articles of clothing. If the petechiae are indefinite or sparse they may often be brought out by the tourniquet test which consists of applying the blood pressure cuff and maintaining the pressure about mid-way between systolic and diastolic pressure for a few minutes. If the test is positive, petechiae appear in increased number distal to the tourniquet. As the degree of deficiency progresses the petechiae become more generally distributed over the body and ecchymoses make their appearance. Bleeding may occur from the mucous membranes and into the serous cavities of the body.

Along with the hemorrhagic tendency there appears fatigability, weakness, and dyspnea on exertion. Frequently, pains in the muscles and bones are complained of. Anemia develops, which is usually the microcytic, hypochromic type. Gross bony changes, falling out of teeth, and marked emaciation are usually not present in the prescorbutic deficiencies.

The accurate diagnosis of vitamin C deficiency is greatly facilitated by chemical methods. One procedure consists of determining the amount of ascorbic acid excreted in the urine after feeding a given quantity of vitamin C. In cases of vitamin deficiency, the vitamin C administered is retained by the tissues and is not excreted in the urine. In case the tissues are saturated with vitamin C, a large portion of that administered is excreted in the urine. Perhaps a more accurate and practical method, however, is the determination of the amount of ascorbic acid in the blood plasma. The rather wide range of normal is supposed to be between 0.3 and 1.8 mg. per 100 cc. An amount less than 0.3 mg. is a positive indication of scurvy. The technique is not difficult and the apparatus and reagents required for making the test are not prohibitive. The procedure deserves more common use.

VITAMIN D

This vitamin, which is fat-soluble, is rather scarce in the foods ordinarily eaten by man. It is present in milk and eggs, but its principal natural sources are fish which contain much oil and, particularly, the livers of those fish. It is transmitted to the body in usable form through the rays of the sun and through artificially produced ultra-violet rays. It may be imparted to certain foods and various medicinal substances, especially animal fats, by exposure to ultra-violet ray. It is obtainable in greatest concentration in viosterol.

Vitamin D is essentially the anti-rachitic vitamin. Since rickets is essentially a disease of early childhood, this vitamin is obviously of chief importance during the first few years of life. Deficiency during that period manifests itself primarily in abnormalities of the skeletal system and results in the clinically recognizable enlargement of the wrists, knees and ankles, bowed legs, beading of the ribs and the rachitic rosary, Harrison's groove and craniotabes. Since body growth and development are coordinated with, and limited by, skeletal growth, it naturally follows that the growth and development of the child who is a victim of rickets will be arrested or impaired.

The mechanism by which deficiencies of vitamin D eventuate in rickets is not well understood, but it is an established fact that vitamin D is an essential factor in the metabolism and utilization of the salts of calcium and phosphorus, which are among the most important components of bone. The feeding of normal or even excessive amounts of phosphorus and calcium will not prevent rickets unless an adequate supply of vitamin D is administered. Conversely, it is obvious that sufficient quantities of calcium and phosphorus are necessary, even in the presence of vitamin D, for normal growth and development of the skeletal system.

There has been much discussion concerning the etiology of dental caries, and the factors involved in causing teeth to decay are still not thoroughly understood. Since teeth are primarily skeletal structures and since their period of development is the same as that of the remainder of the skeleton, namely, the growing period— the rachitic age, it seems reasonable to suppose, and it is fairly generally conceded, that deficiency of vitamin D is one of the most important factors.

Little is known regarding the vitamin D requirement of adults. That is less than in infancy and childhood is undisputed. It is probable that the majority of adults receive enough vitamin D through exposure to the rays of the sun. If partial deprivation of vitamin D produces pathologic states in adults, our knowledge is not sufficient at present to recognize them.

There has been considerable conjecture and investigation regarding the relationship between vitamin D and the parathyroid hormone. It has been shown by Erdheim and others that the parathyroid glands enlarge and the cells hypertrophy in victims of rickets. Hamilton and Schwartz demonstrated an increased parathyroid hormone content of the blood serum of rachitic rabbits. According to Shohl, however, "This overactivity of the parathyroid glands is not the cause of rickets but is caused by rickets. The reaction apparently is a defense mechanism of the body to preserve the normal level of serum calcium, so essential to the body economy. As far as rickets is concerned, this hyperfunction of the parathyroid intensifies rather than ameliorates the condition."

The diagnosis of rickets, even in the very early stage, can be made with certainty by roentgenologic examination. The early changes can best be demonstrated in the distal ends of the radius and ulna. The end of the shaft, which is normally sharp, becomes blurred and finely irregular. The line of termination tends to become concave. The end of the bone is widened and occasionally spurs will be seen at the margins where lime salts have been deposited in the perichondrium. The process of healing may be followed by the deposition of lime salts in the area between bone and cartilage.

Although it does not fall within the scope of this paper, it is interesting to note that vitamin D is the only vitamin definitely known to be toxic when administered in abnormally large amounts. Since the range between the therapeutic and toxic doses is so very large, however, its toxicity is not an important clinical factor.

VITAMIN E

This vitamin is fat soluble. It is found in greatest abundance in wheat germ; less abundantly in green leaves and seeds, muscle and fat tissue. It is commercially available in the form of "wheat germ oil," but the potency and the therapeutic dosage have not been established.

We have very little definite and authentic information regarding vitamin E. It is known as the "antisterility vitamin." Deficiency of vitamin E seems to be a factor in certain cases of habitual abortion. When it is deficient in pregnant women, it seems that changes occur in the fetal decidua, resulting in death of the embryo and interruption of gestation. Deficiencies in the male are thought to produce loss of sexual appetite and infertility.

We do not know the normal requirements of vitamin E, and we have no way of accurately diagnosing deficiency states.

THE VITAMIN B COMPLEX

This was originally thought to be one vitamin, but further study has shown it to be composed of seven or eight closely related factors. The group has an essentially similar source and all components are water soluble. The natural sources contain these vitamins rather sparingly. They are not stored to any great extent by the body tissues. Being water soluble, they are freely excreted through the kidneys and also, probably, through the gastro-intestinal tract. They are not extraordinarily stable. They will resist the amount of heat necessary for cooking, provided the reaction of the solvent in which they are cooked is not alkaline, but, being so freely water soluble, much of the vitamin content may be lost in the water used in cooking. For these reasons, deficiencies of this group occur very readily. It is necessary that the required amount of these vitamins be taken almost daily. We have no definite information as to the amount necessary for maintenance in the human. It is known, however, that in certain states more than the usual amount is necessary. For example, if an extraordinary quantity of water is taken into the body and eliminated by the kidneys, more of these vitamins is required to counteract the excessive excretion. It is probable that in diarrheal states, also, increased intake is necessary to maintain balance.

The natural sources of these vitamins are vegetables, including potatoes; the germ and bran of seeds; eggs, muscle meats and, especially, organ meats; and milk. Some of them are manufactured synthetically.

The better known of the vitamins comprising this group are B-1 and B-2, or G. It seems that the British prefer the term B-2 while in America this vitamin is more commonly referred to as G.

VITAMIN G (B-2)

This is generally referred to as the antipellagra vitamin. Although there is still some difference of opinion regarding the etiology of pellagra, doubt has almost disappeared that vitamin G is an important, if not the only, factor in its prevention. The acceptance of vitamin G as the preventive factor has been enhanced by the favorable effect on the disease of nicotinic acid, which is thought to be closely related to, if not identical with, the active principle of vitamin G.

It is well known that pellagra manifests itself clinically by involvement of the alimentary tract, skin and nervous system. The glossitis, anorexia, epigastric discomfort, flatulence, diarrhea alternating with constipation, bilateral and symmetrical dermatitis appearing on the exposed surfaces of the body, mental depression, hallucinations and disturbances in reflexes and sensation as a result of cord changes are too familiar to require elaboration. These obviously result from profound and more or less prolonged vitamin G deficiency. It is perhaps not so well known that minor grades of deficiency may produce less profound effects upon all three of these systems, or either, independent of the others. It is fairly generally conceded that involvement of the alimentary tract is the first to suffer from vitamin G deficiency. Of the alimentary disturbances, glossitis is perhaps the first to make its appearance.

As stated above, we have no definite information as to the maintenance requirement of vitamin G for the human. It has been estimated, however, that approximately 600 international units daily are necessary for the adult. Neither have we any accurate method of diagnosing deficiencies of vitamin G and must rely entirely upon clinical methods.

VITAMIN B-1

This is the anti-neuritic vitamin. Profound deficiency of vitamin B-1 results in beriberi, a disease formerly very prevalent in the Orient and characterized by polyneuritis, edema and cardiac insufficiency.

To my mind, B-1 is one of the most interesting and important of the vitamins from a clinical standpoint. This is probably due to its numerous physiological actions and to the fact that minor deficiencies are common and manifest themselves in many definite clinical abnormalities. Some of the factors which contribute to the frequency of the B-1 deficiencies have been referred to above, but may be repeated for emphasis. The quantity of this vitamin in foods is not large. Being freely water soluble and not thermostable, much of that present is probably destroyed or lost in the cooking process. It is not stored to any great extent in the tissues and is readily excreted by the kidneys and perhaps through the gastro-intestinal tract. The factors which prevent absorption, or in some way interfere with the action of vitamin B-1, are not well understood, but it has been definitely shown that in some way the imbibition of alcohol predisposes of deficiency and there may be other contributing factors as yet not known.

In addition to its antineuritic action, vitamin B-1, like most other vitamins, is essential to growth and development of the young. It has a pronounced effect on the digestive system, assists in maintenance of normal weight and mental acuity and is of very definite value in maintaining the normal function of the cardiovascular system.

Deficiencies of vitamin B-1 result in degeneration of the myelin sheath of the peripheral nerves and in degeneration of the ganglion cells. Sensory, motor and secretory nerves are affected. It is probable that vitamin B-1 deficiency is a much more important factor in the development of peripheral neuritis, or polyneuritis, than focal infections, which heretofore have been considered the sine qua non in the etiology of these conditions. It is now fairly generally conceded that so-called "alcoholic neuritis" is, in reality, vitamin B-1 deficiency neuritis. Attention has already been called to the fact that alcohol in some way interferes with the intake, absorption or action of vitamin B-1.

One of the most important effects of vitamin B-1 deficiency reflects itself in abnormalities of function of the alimentary system. The most constant of these manifestations is anorexia, although constipation, nausea, glossitis and other gastro-intestinal disturbances have been attributed to B-1 deficiency. The mechanism by which deficiencies of vitamin B-1 produce interference with appetite and other digestive functions has not been thoroughly worked out, but it has been rather definitely proved clinically that a thimble full of vitamin B-1 will do more toward stimulating the appetite than a carload of so-called tonics.

It is well known that beriberi has, as one of its chief manifestations, cardiac insufficiency. That moderate deprivations of vitamin B-1 produce alteration of function of the heart has been called to our attention by Soma Weiss and others. Abnormalities of rate are common. It was formerly believed that bradycardia was more or less constantly associated with these deficiencies, but more recent investigation indicates that tachycardia is quite common. Weiss reported a series of cases with cardiovascular manifestations of definitely subnutritional etiology. The majority of his cases were males and were heavy consumers of alcohol. Besides the cardiovascular abnormalities, they showed other evidences of B-1 deficiency, such as peripheral neuritis, gastro-intestinal disturbances and psychoses. The circulatory symptoms consisted of tachycardia, dyspnea on exertion, edema and orthopnea. On examination, evidences of myocardial insufficiency were present. The electrocardiograms showed absence or depression of the T waves and prolongation of the QT segments. With the administration of vitamin B-1, these symptoms and signs disappeared and the electrocardiograms returned to normal.

SUMMARY

Moderate deficiency of vitamin A results in night blindness and, in childhood, arrested growth and development. Its etiologic relationship to thyrotoxicosis, renal lithiasis and susceptibility to infections is questionable.

Sub-clinical scurvy, resulting from insufficient intake of vitamin C, manifests itself first in a hemorrhagic tendency. Fatigability, weakness, dyspnea, pains in the muscles and bones, and anemia are also present.

Vitamin D is of most importance in childhood. It is doubtful if the adult often suffers from vitamin D deficiency.

Vitamin E deficiency seems to be a factor in certain cases of habitual abortions in the female and loss of sexual appetite in the male.

Alimentary disturbances, particularly glossitis, and perhaps some of the dermatoses may result from moderately diminished intake of vitamin G (B-2).

Vitamin B-1 deficiency is common. It is an important factor in the etiology of peripheral neuritis. It is associated with anorexia and other gastro-intestinal disturbances. It is one of the causes of cardiac insufficiency. Alcohol in some way predisposes to vitamin B-1 deficiency.

THE MISSISSIPPI DOCTOR

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

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Published monthly at Booneville, Mississippi

Annual subscription $1.00

Entered as second-class matter, January 19, 1926, at the post-office at Booneville, Miss., under the Act of March 3, 1870.

THE MISSISSIPPI DOCTOR is the official organ of the Mid-South Postgraduate Medical Assembly and has been since February, 1933. When it was adopted, it was like filling out the birth certificate of a baby, nothing being said about when it was to be un-born. The editor of the journal at his own expense has published from three to five thousand copies each year as the special Mid-South issue. He has published every paper read before the association during this time that could be secured. For this service no financial aid has been asked of the association.

Dr. Lawrence W. Long of Jackson, Miss., succeeded to the presidency of the Mid-South Postgraduate Medical Assembly and presided over the meeting with splendid efficiency. He demonstrated his constructive thinking by calling together the past-presidents and organizing them into a club. This club no doubt will be of great value to the association. The ideas, aid and influence of the past-presidents can always be utilized to an advantage. We cordially congratulate Dr. Long on his constructive work during his short term.

Ideas are not unlike births—many of them are born in the country.

Thanks to Dr. Woodard Beacham of Charity Hospital in New Orleans for his renewal for the journal. This is five years for him in this great institution. You can always bank on these boys. Three of the brothers are already in the profession and are making good in a big way, and now Dan, the youngest, is ready to enter this fall. Fine sons of a fine father and a great and noble mother.

The per capita distribution of funds for the indigent sick is the greatest step forward for carrying modern medicine to the masses that has been made in this country. It is not only just and fair to the unfortunate sick in the small town and rural community, but it also helps to keep alive the small hospital which is the center through which the profession must work. Under this plan if set up just as it should be, each doctor is enabled in a large per cent of cases, to follow and treat his patient at the hospital. This is a strong factor against state medicine. We still have strong critics of this plan of distribution for the indigent. It should not be necessary to zone territory to any hospital, but no doubt there has been some reason for this being done. The hospitals and the doctors should co-operate and support this plan in a manner that zoning would not be necessary. The meager funds we have can certainly do no more than care for the most urgent medical and surgical cases. Doctors should be very careful not to ask that chronic cases be admitted, not until we have more funds. The eyes of the nation are turned upon Mississippi in this forward move for the indigent sick and for better medical service to all the sick in the rural communities. Let us be very careful and co-operative in order that we may go forward and not backward.

Jackson, Mississippi is a fine place to hold the Southeastern Surgical Congress. It is one of the nicest convention towns in the South.

A paper that is worth listening to at a medical meeting is worth reading after the meeting. The essayist really owes it to the members of the association to furnish his paper in some form for publication. Medical associations that grow, live, and serve, publish their papers. We are having many inquiries as to just when the paper of this and that doctor who appeared on the program at the Mid-South is to be published. The doctor who is interested wants to read a paper after he hears it, provided he is impressed by the essayist, and the man who is unable to attend is anxious for the papers.

We deeply regret our inability to attend a luncheon on March seventh given by Drs. Shands, Hagaman and O'Farrell at the Heidelburg Hotel in honor of the visitors from the Mayo Clinic. This association of men is among the strong leaders in organized medicine not only in Mississippi, but in the South. Their kind invitation is deeply appreciated.

THE MISSISSIPPI DOCTOR is having nothing to do with the publication of the Biographical Directory of the Physicians of Mississippi. The Booneville Printing Company placed a bid on the printing of the books, but the journal has no part in it in any way.

It will be good to attend the meeting of the Delta Medical Society next month at Greenville. Dr. Frank Acree has arranged a fine program. Greenville is a wonderful city and it is a great medical center for a city of its size.

We are glad to have Dr. W. A. Evans back home from China, and we hope he may have something to say to you through the journal at an early date. Whatever he says will be of great interest.

We have a nice collection of Mid-South papers this time. You will want to read them. Keep up your subscription to the journal so you will not miss a copy.

Dr. R. L. Sanders is now president of the Southeastern Surgical Congress and Dr. Irvin Abell of Louisville, Ky., is president-elect. They constitute fine surgical leadership.

Don't forget our state meeting at Gulfport, May 9-11. The program is good and the entertainment in this city is always superlative. The Markham Hotel will be headquarters. Write there for reservation.

The Central Medical Society stepped up to the Mayo Clinic for essayists for their March 7 meeting. It seems that they are to keep pace with last year's progress in exemplary fashion.

Dr. and Mrs. Williams of Gulfport have been outstanding figures in the State Medical Association and the Auxiliary for many years. They have been leaders and pioneers. One outstanding trait admired in Dr. Dan is that one always know where he stands. He has the courage of his convictions.

It has been suggested that Mrs. Williams be made an honorary member of the Auxiliary for life. This is a splendid thought and it will be one hundred per cent no doubt when put to a vote. These associations appreciate Dr. and Mrs. Williams and are grateful to them for the service they have rendered. Below you will note some of the honors they have held and some of the services they have rendered.

The recent session of The Mid-South Postgraduate Medical Assembly was, perhaps, the most interesting of any of its meetings. The lecturers came from every section of the country and were representative men in every sense. The subjects were well chosen to meet the needs of the profession as a whole. Only a few of these lectures were to be classed as hypertechnical. In the writer's judgment, Dr. Herrmann's presentation of "The Commoner Disorders of the Heart," was apropos, indeed. Dr. Kracke dealt with leukopenic diseases in a most practical and helpful way. Dr. Musser made it clear that many subclinical cases of pellagra are met with in general practice. He also made it clear that these cases, if recognized, can be greatly benefited. In our thinking and experience, these border line cases are very common and should but rarely be missed. It is tragic, at times, to fail to recognize them. All too many of them are referred to the surgeon. When one of these psychoneurotics goes under the knife she might as well "leave hope behind." Dr. Alton Oschner might be called "our handy man." His lectures are always interesting and helpful. He is peculiarly fitted to discuss thrombophlebitis and peripheral circulatory disturbances. It remained for Dr. Anthony Bassler to deal with "The Pathological Gall Bladder."

He did so in a most masterly, though simple manner. His lecture was well worth the time and money expended on the trip.

We cannot understand how doctors can fail to see that they owe it to themselves as well as their clientele to attend such meetings regularly. We are free to say that no man who does not do so is keeping abreast and consequently is not entitled to full confidence and patronage of the public. The men and subjects mentioned above were the high-lights of the meeting. These men are from the leading medical institutions and are recognized as authorities. Of course, there were other good men on the program, but, as we see it, the ones mentioned came nearer supplying the needs of the general practitioner. After all, the family physician is the background and backbone of the profession. Surgeons and specialists are fine and cannot be dispensed with or spared. But we once heard Dr. W. J. Mayo say that it takes eight specialists to equal and displace one doctor.

* * *

The next important meeting for us of North Mississippi will be held in Columbus. We refer, of course, to the first quarterly meeting of the Northeast Mississippi Thirteen-County Medical Society. Columbus is a great town—its doctors are splendid representatives of our profession and are fine fellows in every respect. The program will be good and the fellowship and entertainment (as always) will be too good to miss. We hope the attendance will be full. Do not fail to come—bring some other member with you.

* * *

We have no doubt that all readers of the journal are waiting to see what will happen or be done with regard to socialized medicine. Perhaps there is little we can do; but trust that we all realize that solidarity of purpose and thoroughness of organization will protect the interests of both the public and the profession.

We cannot refrain from mentioning the fact that the star of hope seems to be rising, that there may yet be forthcoming a worthwhile medicine for oral treatment for pneumonia. We will not discuss this question in this column further than to urge every reader to keep up with literature and reports on the subject. We have been asked to discuss life-saving measures in handling this great killer disease, at Montgomery, at the meeting of the Alabama State Association in April.. However, I feel that it is almost superfluous to do so, further than to exhort all doctors to catch step and forward march, discarding all traditional practices. Pneumonia has not been scientifically treated in the past—there is no longer excuse for dereliction.

G. S. B.

The postgraduate teaching program has been in progress in the state for the past four years and is continuing to give the physicians practical work in various branches of medicine at minimum cost to them.

At the present time there are two courses being given in the state. The first one, in syphilology has been conducted for over a year and seems to be one which is very timely and should be valuable to the practitioner.

Recently a new course has been organized covering some common conditions in surgery and gynecology which the average physician sees every day. It apparently has been appreciated very much by physicians in the section of the state where the course has been given.

This method of teaching is designed to give the physician who is unable to go away for postgraduate work some assistance in making his practice better and to stimulate him to take further work, if it is possible.

Every physician should realize that any way in which he can prepare himself to render better medical care is a means by which the medical profession will retain its enviable position in the country, particularly in these days of radical changes. Postgraduate medical education is one of the most important ways by which the practice of medicine can be maintained on a high plane. Extension medical teaching should be a permanent part of continued medical education.

It is truly a deplorable condition when an announcement is sent forth that a patient afflicted with meningitis at the State Charity Hospital cannot be treated because the institution has no funds with which to buy serum, costing $25.

Publication of the story Tuesday morning caused a collection to be taken at the city hall and sent to the superintendent of the institution.

The phrase, "cold as charity," aptly applies to the niggardly way our legislature has dealt with the Charity Hospital in this city and similar institutions at other points in the state.

A "pork barrel" hospital appropriation bill is passed each year for maintenance of charity wards in private or semi-private hospitals, much of it is wasted, and the budgets for institutions owned by the state, and for which the commonwealth is morally responsible are cut to the quick, utterly inadequate for the purpose for which voted.

The charity hospital situation in Mississippi is rapidly becoming a scandal. Unless they are to be supported properly and adequate treatment for patients assured, they should be abolished.

Letting a human being suffer or die for lack of a $25 serum treatment is hardly short of barbarism.

The above appeared in a recent issue of the *Jackson Daily News*. It is unfortunate for a person in Jackson not to have serum available for treatment for meningitis. By some means it should be furnished. But when it is made available for patients who may go to the charity hospital in Jackson, Miss., provision should be made for every other unfortunate person in the state whether in the hospital or out from Yellow Rabbit to Vinegar Bend. Making up money for an unfortunate sick person in Prentiss County is nothing new. It has certainly been going on here for twenty years to our personal knowledge. There is certainly no provision made in the "pork barrel" appropriation that the editor refers to in our private and semi-private hospitals. Neither are the funds to these hospitals adequate for the emergency sickness of the indigent not requiring serum.

Some of this "pork barrel" fund may not have been used just as well as it might, but to say that it has been wasted, is going pretty far. It is very fortunate for the state that the private and semi-private hospitals have saved the state so much investment and are willing to take care of these unfortunate sick on a cost basis. Just suppose that the patient that the editor spoke about should have been in Prentiss County and suppose that the charity hospital in Jackson had the funds to pay for the serum, then what? Who would have paid the transportation? The facts are that for many years seventy-seven counties supported five state-owned charity hospitals without receiving very much benefit for its own indigent sick. This system was as unfair as anything could be. The state is just as much obligated to take care of a charity patient out at the cross-roads and down by the old mill stream as it is in any city in the state.

Mississippi has made a good start on the best system for the care of the indigent sick of any spot on this earth. Mississippi has ninety-two hospitals within its borders. It has the most wonderful set-up for the distribution of funds for the indigent on a per capita basis of any section in the United States. The medical profession and each and every hospital should do its part to see that the funds are used to the best advantage. It is true, however, that Mississippi owns five of the seven state-owned charity hospitals in the United States. A large charity hospital here and yonder is entirely out of date now, just as a high school here and there would be. Forty per cent of the men and women who are the leaders in the cities and in big business come from the rural communities. Man power constitutes our greatest wealth. The source of this man power should be guarded. The health of these rural people should be looked after as well as their education, their morals and their religion. We think the state should have one central charity hospital as a kind of clearing house for special cases, especially our cripples. It would seem logical to locate this hospital in the capital city. If so, Jackson and Hinds County should put up one-half the money. The hospital should be modern in every respect and well equipped. Then with this and the hospital at Whitfield, the T. B. Hospital and the State Board of Health, we could offer a fine two-year internship to our young men just out of medical school. The per capita distribution of funds is just as fair for one county as the other. Any just and fair thinking man must admit this. Let us continue our lead in rural medicine and show the way to the world. It is hoped that the able editor of this big daily will inform himself on the progress we have made and lend his aid in helping us go forward. Every person should feel a pride in our hospital progress.—The Booneville Independent.

IN MEMORIAM*

There is genuine sadness and keen regret, that the venerable president, Dr. R. M. Adams, who for more than a quarter of a century attended this meeting so faithfully, and loved it as a member of his own family, is not with us. We can not but think of the supreme happiness that this session of the Mid-South would have afforded him. But the bugle sounded and he was called from the line of march in human service. There seemd to be no questioning in his heart of the wisdom of the Superior officer. With good cheer and evidence of certainty of his destination, he stepped behind the curtain.

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*Tribute read and adopted at the meeting of the Mid-South Postgraduate Assembly, Feb. 16, 1939.

Dr. Robert M. Adams of Ripley, Mississippi, died at the Baptist Hospital in this city on July 1, 1938. He was sixty-five years of age. At the time of his death he was president of the Mid-South Postgraduate Medical Assembly, the North Mississippi Medical Society, was local surgeon of the G. M. & N. Railroad and teacher of the Men's Bible Class of the Methodist Church of Ripley.

He left his wife, Mrs. Pattie Etta Murry Adams, three sons and one daughter. Dr. W. M. Adams of Memphis is a plastic surgeon, Herman Adams of Utica, Miss., is practicing law, Lorenza, is a medical student in the University of Tennessee. Mrs. Adams and Miss Victoria now reside in Memphis.

In the death of Dr. R. M. Adams the medical profession lost one of its choicest members. He was a general practitioner of the highest order. He felt that his responsibilities were sacred. He possessed a splendid literary education, his language was select, his tongue was versatile, his information broad and comprehensive, his judgment sound and his wisdom mature. His health vision projected far into the future. His passion for the conservation of health was deep and sincere, inspired by his high estimation of human values. Public health was a passion with him. He preached it for more than a year while with the public health department of the state, and no other man in Mississippi has yet done it so eloquently and with such sincere appeal to the public. Along with his deep concern for public health was his devotion to motherhood. His heart, mind and soul went out for a better day for mothers in motherhood. In obstetrics he was safe, sound and sympathetic. A new-born baby free of disease and injuries with a mother free of lacerations and damage to organs made him supremely happy. In performing his duty to motherhood he was ever mindful of his responsibility to citizenship, not only pains-taking in aiding a new life to come into the world, but broad in his plans to help build a nation sound and secure. He was not only versatile in general information and thorough in his professional duties, but he carried with him a heart that was kind and sympathetic and a personality that had been quickened by the Divine touch and was full of inspiration and human interest.

But few ministers of the Gospel knew the Divine teachings so well as did Dr. Adams and but few could expound them so eloquently. He was a total abstainer from strong drink and clean and chaste in his living. His love for his family was as deep as the waters of the sea. The values they possessed were the greatest of all earthly ones to him. In deed and in truth the profession has lost one of its most noble members, the Mid-South one of its most deserving presidents, his family one of the earth's most devoted fathers, his church one of its most inspirational teachers, and his state one of its finest Christian citizens.

Now, be it resolved by this society, the Mid-South Postgraduate Medical Assembly, that to-day the presence of Dr. Robert Milton Adams is greatly missed, that his loss is felt by the Association, that his death is deeply regretted, and that this society offers its deepest sympathy to each member of the family; and further, that a copy of the resolutions be spread on the minutes of this Association, that one be furnished to Mrs. Adams, and one published in THE MISSISSIPPI DOCTOR, the official organ of the Association.

Respectfully submitted
W. H. Anderson, Chairman
Memoirs Committee

DR. INMAN W. COOPER

Of all the physicians in Mississippi and throughout the country of my acquaintance, no one has been more useful to the medical profession, the public health program, and the people, than my late and lamented friend, Inman W. Cooper. Possessing the higher type of talent which is entitled to be called genius, he adorned and dignified every one of the many positions of honor, in and out of the medical profession, that he held. It will be a long time before we see his like again, if indeed, we ever do during our brief span of life.

As I write these words, my heart grows tender at the memory of my departed friend, who never failed me or any other friend. Inman Cooper never espoused a cause in which he did not believe or meet an issue or an opponent of whom he was afraid.

Once, a man walking along the highway found a coin lying in the dirt and ever afterwards, all his long life, he kept his eyes upon the ground hoping to find another coin. He missed seeing beautiful flowers along the roadside, pleasant meadows and God's trees, and did not hear the sweet songs of birds. All of these were lost to him. The story is that he died a rich old man, but all he had seen of this wonderful world was a dirty road in which to pick up dirty money. Inman Cooper was a busy, loving and unselfish man, serving his friends and those all around him who needed him or his help.

There is an old superstition I have heard since boyhood that if a hunter dipped the point of his arrow in his own blood, it would go unerringly to his mark. Inman Cooper's love and friendship must have been bathed in his heart's blood. This great loving heart no longer throbs and warm life blood courses no more through his veins. My friend has departed from this world, but there will continue between us the ties of friendship which will endure beyond this life.

If for every good deed, a flower had been brought to his grave, he would have slept beneath a wilderness of flowers, more perhaps than could have been placed within the largest auditorium in the City of Meridian. Let those who knew him profit by his fine example of unselfish service and friendship.

Felix J. Underwood

DELTA MEDICAL SOCIETY PROGRAM TO BE HELD IN GREENVILLE, MISSISSIPPI

APRIL 12, 1939

"Electro-cardiogram as an Aid to Diagnosing Heart Conditions."—Ira B. Bright, M. D., Greenwood, Miss.

"Sulfanilamide—Its Use in General Practice." —Joe G. Peeler, M. D., Shaw, Miss.

"The Management of Diabetes in Country Practice."—O. P. Myers, M. D., Indianola, Miss.

"Cancer of the Colon."—E. T. White, M. D., Greenville, Miss.

"Allergy."—J. R. Jackson, M. D., Belzoni, Miss.

"What the Present Trend Towards Socialized Medicine Is Going to Do to the General Practitioner."—O. W. Hyman, M. D., guest essayist, Dean of University of Tennessee Medical School, Memphis, Tennessee.

WALTER EDWARD VEST

President of the Southern Medical Association

An exceedingly modest man is the recently elected president of the Southern Medical Association, so modest that it has been difficult to obtain information about him for this brief sketch.

He is a Virginian, born in Floyd County, in 1882, the son of William Madison and Mary Susan (Boone) Vest. He was graduated from William and Mary College in 1902, where he won a Phi Beta Kappa key. He taught German at William and Mary for two years after graduation, and has been sufficiently interested in its alumni association, of which he was president in 1927. In 1936 the alumni medallion was conferred upon him for his service to the alumni association .

He completed a four-year course at the Medical College of Virginia in three years, and was a member of the Phi Beta Pi there. He took his M. D. degree in 1909. After a period of internship and postgraduate study in Richmond and New York, he began a general practice in Meberrin, Virginia. In 1915 he moved to Huntington, West Virginia, and specialized there in internal medicine. He was president of the General Alumni Association of the Medical College of Virginia in 1931.

He married in 1910 Miss Sadie Blankinship, of Brookneal, Virginia, and they have a son, Walter, Jr., now following in his father's footsteps as a student in the Medical College of Virginia.

During the World War, Dr. Vest was Chief of the Medical Service at the base hospital at Camp Wadsworth, South Carolina, where he was highly regarded and is affectionately remembered by his associates.

Dr. Vest is a member of the American Therapeutic Society and a Fellow of the American College of Physicians, now representing West Virginia on the board of governors of that organization. He is president of the Public Health Council (Medical Examining Board) of West Virginia and has been for several years a member of the House of Delegates of the American Medical Association. He is now serving as a member of the Committee of Seven of the American Medical Association, to meet with representatives of the Federal Government to consider a health program for the United States.

In West Virginia he has worked tirelessly for organized medicine. He has been president of the county and state medical societies, of Chesapeake and Ohio Surgeons' Association, and associate editor of the WEST VIRGINIA MEDICAL JOURNAL, one of the best and most widely read of the state periodicals. He is affiliated with the Methodist Church, the Masonic Order, the Kiwanis Club, and is a democrat.

The Southern Medical Association has been fortunate in having his enthusiastic support since 1913. He became a member of its council in 1925 and chairman in 1929, in which position he served for two years. He has also been chairman of the Section on Gastro-enterology and has made valuable contributions to the journal.

The new president does not drink or play cards, and is not even a golfer. According to his intimates, his chief diversion is medical reading. Organized medicine, like many of the world's great governments, is now under stress from many quarters. It needs in prominent positions men of ability, ideals and clean life, whose characters are like Dr. Vest's, a guarantee of capable and unselfish leadership of which future generations will be proud. The Association is peculiarly fortunate in its new president.

DR. D. J. WILLIAMS

Daniel J. Williams, born Lawrence County, August 16, 1868. Parents, Hiram G. Williams and Hattie Price. Attended Public and High Schools — matriculated Mississippi College (Clinton) 1895. Matriculated Tulane University as medical student 1888, graduated 1890 and was licensed to practice medicine the same year. Located at Moss Point. In 1891 was in charge of the Quarantine Station at Ship Island. Joined the State Medical Association.

Moved to Ellisville, Jones County, 1892. Organized the Jones County Medical Society in the spring of 1893 with thirteen members—is now the only surviving member of that organization. Was elected a member of the original Council of the Mississippi State Medical Association for the Ninth District at the reorganization of the State Medical Association in 1903, and reported all of the eight counties then comprising the Ninth District, as organized at the following meeting of the State Medical Association in 1904. Was secretary of the Council in 1906 and president of the Council 1907 to 1911, when he was elected president of the Association.

Appointed a member of the Mississippi State

Board of Health as one of the five nominees of the State Medical Association in 1908, and was chairman of the executive committee of the Board of Health for four years. On motion of Dr. G. S. Bryan, was appointed committee of one to put in operation an educational program for the State Board of Health, employed Dr. Fred J. Mayer of Operousas, La., now past president of the Louisiana State Medical Association. This was the beginning of the first state-wide Public Health program put on by state authority of any state in the Union 1908.

At a meeting of the State Medical Association in 1911, he was elected president without opposition, and the same year was elected vice-president of the Southern Medical Association.

Moved from Ellisville to Gulfport, January, 1912. July 1, 1915 appointed part time health officer for Harrison county. November 1, 1917 made full time county health officer—the first in Mississippi, the third in the United States and now the longest in continued service in the United States.

1917 again elected a member of the Council, having resigned from that office when elected president in 1911—again elected chairman of the Council in 1921 which office he continues to hold. Delegate to the A. M. A. for five consecutive years.

November 30, 1918 married Miss Lola Maude Hepler of Winfield, Kans.

MRS. DAN J. WILLIAMS

Maude Hepler Williams, reared and educated in Kansas by Southern parents—father a Confederate veteran, mother a Quaker, both born and reared in North Carolina. Nurse training, Ensworth Hospital, St. Joseph, Mo., graduating in 1910.

Because of climate, came to Mississippi coast in 1914—bought a 20-acre piece of land back of Pass Christian.

In presenting flattering letters of recommendation from the doctors in St. Joseph to the profession there—met, and later married Dr. Williams, inveterate bachelor of those parts.

She has attended every session of the State Medical Association since. Organized State Medical Auxiliary in 1923—was president first two years, served in some official capacity ever since its organization.

President of Medical Auxiliary to the Southern Medical Association 1915-26. Organizer and past-president of the Auxiliary to the Harrison-Hancock-County Medical Society.

Organizer the Harrison County P. T. A. and president for two years. Serving now the ninth year as president of the Gulfport Woman's Club, one of the most active in the state, and has served as general chairman of Doll and Toy Fund there for seventeen years without a break. Active member of the Gulfport Chamber of Commerce, serving now second year as chairman of Beautification and Sanitation Committee.

Just completed assisting in the publication of the "Gulf Coast Guide," a Federal Writers Project, which had to be sponsored by an outstanding organization. The Gulfport Woman's Club was selected. She was made general chairman and Dr. Margaret Caraway, publicity chairman for the club.

A big house and yard in which our 800 camellia japonicas and about the same number of azaleas grow, added together with a smattering of social life and the care of husband and visitors has given her diversified activities.

News and Comments

Dr. A. C. Broder and Dr. L. S. Merriweather, nationally famous physicians from Mayo Clinic at Rochester, Minn., addressed the students, faculty and visiting doctors at the University of Mississippi School of Medicine, March 6. Dr. Broder discussed the classification of different types of cancer. Dr. Merriweather presented an illustrated lecture on the central nervous system and the effects which syphilis has on it.

Dr. Broder and Dr. Merriweather also appeared on the program of Central Medical Society at Jackson.

When William L. Stidger asked Edwin Markham (*Man with the Hoe*) how it felt to be eighty-five, he liked that question and swung into it as a prize fighter swings into his opponent:

"Here's my answer, William. Put that into your piece. I wrote it when I was eighty. I am now eighty-five and still mean it. I do not know what the coming years will hold for me; dissolution, no doubt, as comes to all men, as came to Emerson, Carlyle; but son, no matter what comes to me, these lines will be my manifesto as I swing up the steep trail of life into the sunset clouds, and on to the peaks of eternity:

"I am done with the years that were;
  I am quits
I am done with the dead and old
  They are mines worked out;
I delved in their pits
  I have saved their grains of gold.

"Now I turn to the future for wine and bread
  I have bidden the past adieu.
I laugh and lift hands to the years ahead:
  Come on! I am ready for you."

And as he quoted that poem this white haired old poet stood on his feet, lifted his hands and fairly shouted out that last line with defiance and a great laugh, "Come on! I am ready for you."

(A bit of philosophy expounded by the big hearted and versatile Dr. Jere Crook of Jackson, Tenn., at the organization of the Past Presidents' Club. Ed.)

Dr.Rufus H. Aldredge of New Orleans, is announcing the opening of his office at 710 Maison Blanche Building. Practice limited to orthopedic surgery.

Dr. Charles E. Ward, Mayo Clinic, Department of Pediatrics is now associated with the Medical Clinic, Jackson, Mississippi.

One negro woman to another: Has you all bought your Tuberculosis Seals yet?"

"No, I ain't never bought none. What they for?"

"They sell 'em to prevent tuberculosis, and I buy me fifty cents worth every Christmas and stick 'em on my chest and I ain't never had tuberculosis."—Southern Hospital.

DR. O. W. HYMAN

Dr. O. W. Hyman, administrative officer and dean of the College of Medicine of the University of Tennessee.

He is to appear on the program of the Delta Medical Society which meets at Greenville on April 1. His subject will be, "What the Present Trend Toward Socialized Medicine is Going to do to the General Practitioner." It will be mighty good to hear this able and widely known man.

Dr. Hyman is a native of North Carolina, born at Tabora in 1890. He received his A.B.

degree from the University of North Carolina in 1910 and his M. A. in 1911. In 1912-13 he was assistant professor of biology at the University of Mississippi. In 1921 he received his Ph.D. degree from Princeton and the same year became professor of histology and embryology at the University of Tennessee. He has served as administrative officer and dean of the College of Medicine of the University of Tennessee since 1925. He has written many papers on histology and embryology and on medical economics and medical pedagogy.

Under the leadership of Dr. Hyman the School of Medicine of the University of Tennessee has grown rapidly. It is taking its stand among the very best and Memphis is being recognized as a great medical center. It will be worth your time to attend the Delta meeting.

FROM OLE MISS MEDICAL SCHOOL

Dean B. S. Guyton reports the transfer of second year medical students as follows:

James Lauderdale, Jr., Jackson, Tulane University Medical School, Onyx P. Garner, Pontotoc, University of Tennessee Medical School; Claude A. Jackson, Kosciusko, Tulane University Medical School; John W. Watkins, Quitman, Emory University Medical School; Hurd Horton, Jr., Grenada, University of Tennessee; Frank T. Tatum, Tupelo, Washington University Medical School; James G. Lopez, Biloxi, Tulane University; Wm. Herbert Lunceford, Slate Springs, University of Tennessee; Marshall B. Lynch, Oxford, University of Tennessee; George C. Furr, Oxford, University of Tennessee; Willard A. Barnes, McCool, University of Tennessee; Miriam Wallace, Biloxi, Tulane University; Malcolm Pigford, Laurel, University of Tennessee; Bryant S. Swindoll, Slate Springs, University of Tennessee.

The above students will report to the institutions named in June or September of this year, where they will complete their third and fourth years of medical study.

ROWLAND MEDICAL LIBRARY

The new postage rate on books makes it possible to borrow and return the average book at a total cost of 6c.

Books may be borrowed for two weeks and renewed for two weeks. Requests should be accompanied by stamps to cover postage (3c for one book). Recent reprint material on any subject will be sent on request.

NEW BOOKS

Browne: *Arabian Medicine.* 1921.

Curtis: *A Textbook of Gynecology.* 1938.

Cecil: *Textbook of Medicine,* 4th ed. 1938.

Etheridge: *Health Facts for College Students.* 1937.

Hippocrates: *The Genuine Works of Hippocrates,* by Francis Adams. 1886.

Holt: *Holt's Diseases of Infancy and Childhood.* 1936.

Hoskins: *The Tides of Life; the Endocrine Glands in Bodily Adjustment.* 1933.

Lambert: *Introduction and Guide to the Study of Histology.* 1938

Light: *Opium Addiction.* 1930.

Mallory: *Pathological Technique.* 1938.

Sharp: *Practical Microbiology.* 1938.

Sobotka: *The Chemistry of the Sterids.* 1938.

Strecker: *Alcohol: One Man's Meat.* 1938.

Tauber: *Enzyme Chemistry.* 1937.

COMING MEDICAL MEETINGS

MISSISSIPPI STATE MEDICAL ASSOCIATION, Gulfport, Miss., May 9, 10, 11.

Alabama Medical Association, Montgomery, Ala., April 18-20, 1939.

Tennessee State Medical Association, Jackson, Tenn., April 11-13. 1939.

American Medical Association, St. Louis, Mo., May 15-19, 1939.

American College of Physicians, New Orleans, March 27-31, 1939.

Southeastern Surgical Congress, Atlanta, Ga., March 6-8, 1939.

Arizona State Medical Association, Phoenix, April 13-15, 1939.

Southern Medical Association. Memphis, November, 1939.

Georgia Medical Association, Atlanta, Ga., May 9-12, 1939.

International College of Surgeons, New York City, May 22, 23, 24, 1939.

American Association for Study of Goiter, Cincinnati, Ohio, May 22-23-24, 1939.

Mississippi State Hospital Association, Jacksonville, Fla., April 13, 14, 15, 1939.

Florida Medical Association, Daytona Beach, May 1, 2, 3, 1939.

American Congress of Obstetrics and Gynecology, Cleveland, Ohio, Sept. 11-15, 1939.

PAST PRESIDENTS' CLUB ORGANIZED AT MID-SOUTH POSTGRADUATE MEDICAL ASSEMBLY

Members present, sitting, left to right:

Dr. J. B. McElroy, Memphis, Tenn., 1903; Dr. Jere L. Crook, Jackson, Tenn., 1904; Dr. Allen E. Cox, Helena, Ark., 1905; Dr. F. J. Runyon, Clarksville, Tenn., 1906; Dr. John Darrington, Yazoo City, Miss., 1912; Dr. A. G. Hudson, Memphis, Tenn., 1916; Dr. B C. Arnold, Jackson, Tenn., 1922.

Standing, left to right: Dr. W. H. Anderson, Booneville, Miss., 1926; Dr. V. B. Philpot, Houston, Miss., 1929; Dr. P. W. Lutterloh, Jonesboro, Ark., 1930; Dr. N. S. Walker, Dyersburg, Tenn., 1931; Dr. L. H. McDaniel, Tyronzo, Ark., 1933; Dr. P. W. Rowland, Oxford, Miss., 1935; Dr. H. King Wade, Hot Springs, Ark., 1936; Dr. C. R. Crutchfield, Nashville, Tenn., 1938; Dr. Lawrence W. Long, Jackson, Miss., 1939; Dr. H. Fay Jones, Little Rock, Ark., 1940; Dr. A. F. Cooper, Memphis, Tenn., honorary member, is preparing biographical sketches of each member.

Past presidents who were unable to attend are Doctors J. W. Barksdale, Jackson, Miss., F. L. Husbands, Blytheville, Ark., and C. M. Harwell, Osceola, Ark.

PAST-PRESIDENTS' CLUB ORGANIZED

Several days previous to the fifty-fourth annual session of the Mid-South Postgraduate Medical Assembly which convened on February 14, 1939, Dr. Lawrence W. Long of Jackson, Miss., who succeeded to the presidency on the death of Dr. R. M. Adams of Ripley, wrote every living past-president of the Association to be his guest at a banquet at the Peabody Hotel on the evening of February 15. In response to the invitation of President Long, seventeen of the twenty known living former presidents assembled in room 213. A picture was taken of the group after which a bounteous dinner was served by President Long. Dr. J. B. McElroy was then chosen as temporary chairman. On motion of Dr. V. B. Philpot the name of Club of Past-Presidents of the Mid-South Postgraduate Assembly was adopted as the name of a permanent organization. On motion of Dr. W. H. Anderson, the officers were to consist of a president, vice-president, and secretary, which were then selected as follows: president, Dr. P. W. Rowland, the only living charter member, Oxford, Miss., vice-president, Dr. J. B. McElroy, Memphis, Tenn., the oldest living man in term of service; secretary, W. H. Anderson, Booneville, Miss.

On motion of Dr. A. G. Hudson, Memphis, Tenn., a committee was appointed consisting of Doctors P. W. Rowland, J. B. McElroy, H. Fay Jones, Lawrence W. Long, and W. H. Anderson to consult with Dr. A. F. Cooper, secretary of the Mid-South Postgraduate Medical Assembly relative to the meeting for next year. Dr. Fay H. Jones, president-elect of the Mid-South, invited all the members to meet him one year from the date as his guests at a similar banquet.

On motion of Lawrence W. Long, Dr. A. F. Cooper of Memphis, Tennessee, was unanimously elected an honorary member of the club.

Before adjournment a rising vote of thanks was given to Dr. L. W. Long of Jackson, Miss., for his thoughtfulness in calling the past-presidents together and for his generosity in furnishing the banquet.

TO THE COUNTRY DOCTOR

When shadows dark as night did fall,
And eyes grew dim with tears.
I sought for one whose counsel wise
Would make them disappear.
I waited, and then lo! it came—
That counsel—and then I knew
I'd found a source of help and strength
For I had faith in you!

You courage gave—my fears assuaged;
You led me where 'twas bright,
And a vista down the years, I saw—
You helped me wage my fight.
Peace, calm, and courage came to me,
And days of gloom were few;
I'd found the power to follow on,
For I had faith in you!

Well knew I, that great help Divine
Would guide you, and you'd do
The things that I most needed
If my strength, I would renew,
And so we fought that battle,
And 'twas won with wonders, too,
For you had skill and guidance
And I had faith in you!

The years will come—the years will go,
But nothing that life can do,
Because of those days that grew
Will ever leave me baffled long,
To mean so much to me in life,
As they taught me how to hew
A structure of strength and courage strong,
For I had faith in you!

—Cornelia C. Cannon
Starkville, Miss.

April 17, 1938

Dr. Hunter Scales was really the doctor this lady had in mind when she wrote this poem. But Dr. Scales thinks it applies just as truly to the average country doctor. There is a personal interest, faith, and co-operation that is essential to success expressed in this poem. Ed.

PROGRAM
Northeast Mississippi Thirteen-County
Tuesday, March 14

Meeting called to order by president—Dr. J. W. Lipscomb.

Invocation—Rev. J. D. Wroten, pastor First Methodist Church.

Reading and adoption of minutes of last meeting.

Paper: "Practical Points In the Eye, Ear, Nose and Throat Field"—Dr. D. E. Staton, Columbus.

Paper: "The Modern Treatment of Endocervicitis"—Dr. J. C. Green, Tupelo.

Paper: "Mental Health During Childhood" —Dr. H. L. Scales, Jr., Starkville.

The visiting essayist, Dr. Andrew L. Glaze of Birmingham delivered an address entitled, "A Treatment for Vesicular Ringworm of the Hands and Feet."

ANNOUNCEMENT OF VAN METER PRIZE AWARD

The American Association for the Study of Goiter again offers the Van Meter Prize Award of three hundred dollars and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The Award will be made at the annual meeting of the Association which will be held in Cincinnati, Ohio, on May 22 to 24, 1939, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations; should not exceed three thousand words in length; must be presented in English and typewritten double spaced copy sent to the corresponding secretary, Dr. W. Blair Mosser, 133 Biddle Street, Kane, Pennsylvania not later than April 15, 1939. The committee, which will receive the manuscripts, is composed of men well qualified to judge the merits of the competing essays.

POSITION WANTED

Laboratory and x-ray technician desires position in small Southern hospital. Six years active experience, age 26, married. Salary open. Present location in Vicksburg, Miss.

William Bailey, Div. of Lab.
Vicksburg Infirmary.

DR. JAMES W. LIPSCOMB

President of Northeast Mississippi Thirteen-County Medical Society

Dr. Lipscomb was born in Columbus, Mississippi, August 27, 1868.

He received his education at the Franklin Academy of that city, his B.S. degree from Mississippi State College, and his M.D. degree from Vanderbilt University.

He was vice-president of the State Medical Association at one time.

He is the third generation of Drs. Lipscomb in Columbus, their combined labors covering a period of 106 years of continuous practice of medicine in this city by the family. A son, Dr. James Walton Lipscomb of Jackson, Miss., makes four generations of doctors in Columbus, since he practiced there for a year.

Dr. Lipscomb was appointed to the State Board of Health by Gov. Henry Whitfield in 1926, elected president of the board in 1932, re-elected in 1938 for six more years.

He has been county health officer of Lowndes County for a number of years; did postgraduate work at intervals in New York, Chicago, and New Orleans.

Being president of the State Board of Health makes him automatically president of the Board of Trustees for State Tuberculosis Sanitarium.

Dr. Lipscomb is a man of broad education, a citizen always interested in the affairs of his state, his nation, and his church. He has rendered valuable service in organized medicine. In the field of oratory he is quite a master, having the ability to appeal to the intellect at the same time he moves the heart. In 1915 at Hattiesburg he introduced Dr. Rudolph Matas, who delivered such a masterful address it has twice been published in book form. The following excerpt from Dr. Lipscomb's introduction attests his own eloquence:

"The foremost man in the foremost college in this great Southland of ours, the Nestor of our brilliant and gifted profession, he needs no introduction. We have but to mention his name and his contemporaries throughout the United States stand at attention. Someone has said that, to be an ideal doctor, we must possess the wisdom of Solomon, the faith of Abraham, the meekness of Moses, the patience of Job, the charity of Dorcas, the eloquence of St. Paul, the bravery of Joshua, the strength of Samson, the executive ability of a Jezebel, must be a hunter like Nimrod, a fisher like Peter, a climber like Zaccheus, a driver like Jehu. He should be free of Asa's gout, the melancholy of Saul, the gastric infelicity of Timothy; have all the virtues of the most virtuous and the religion of all saints. All of these are his. And now, ladies and gentlemen, I have the ditinguished honor, the esteemed privilege and the great personal pleasure of introducing to you Dr. Rudolph Matas, of New Orleans, who will deliver the oration."

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

A Water-Borne Outbreak of Gastro-Enteritis Due to a Cross Connection*

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JACKSON, MISS.
and
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CLEVELAND, MISS.

On September 22, 1937, complaints began to reach the Bolivar County Health Department relative to gastro-enteritis and about the taste and odor of water in a certain section of Cleveland, Mississippi. These reports led the health officer to make an investigation to determine the cause and nature of the illness. About two weeks after the beginning of the epidemic the supervisor of the Epidemiological Unit and a member of the Division of Sanitary Engineering, with the aid of local personnel continued the study of the affected area to find more about the specific cause of the disturbance and whether cases of typhoid fever were developing.

Cleveland is a town with a population of 3500 people in Bolivar County in the heart of the Mississippi Delta. Investigation of the epidemic was through the house-to-house survey method, beginning in the section of town from which the reports came, since none of the cases was reported by physicians. The survey revealed that from September 19, through September 24, 157 of a total of 366 people in 92 families living on and near Sunflower Road leading east from Cleveland, were attacked by a rather severe gastro-enteritis. Practically all people in this area state either on September 19 or 20, they noticed that the water had a disagreeable taste and odor and was discolored. This being true, the water was investigated and it was found that all people sick had consumed water from the city water main supplying that area. Thirteen families were surveyed in the area not supplied by the suspected main. In these 13 families were 57 people, none of whom gave a history of having had the illness. On September 22, the water mains in the polluted area were flushed and heavily chlorinated by pouring chlorinated lime directly into the mains. In addition, the whole water system was chlorinated.

It was further found that a cross connection was made on September 18 at the intersection of Highway 61 and Sunflower Road by which water from a sewage polluted bayou was pumped into the city water main.

Type of Illness

The characteristics of the illness were those of a very acute gastro-enteritis with predominating symptoms of profuse diarrhea, nausea, vomiting, and abdominal pains. Onset was very sudden with abdominal pain and nausea followed by diarrhea. In most instances, temperature was not determined. In two instances, temperature ranged from 101 to 102. Vertigo was frequently complained of. All of the symptoms except diarrhea disappeared within three or four days, but diarrhea was most persistent. Diarrhea persisted in 98 cases for three days or less, in 13 cases for 7 days, and in 15 cases it was still present at the end of two weeks from onset.

Date of Onset

The first cases had their onset on September 19, and the last cases on September 25 (Fig. 1.). The explosiveness of this outbreak is characteristic of a water-borne outbreak, with a very sharp daily increase of cases until the peak is reached, followed by a much less rapid decline.

Number Having Onset On:

Sept. 19	8
Sept. 20	63
Sept. 21	60
Sept. 22	15
Sept. 23	8
Sept. 24	2
Sept. 25	1

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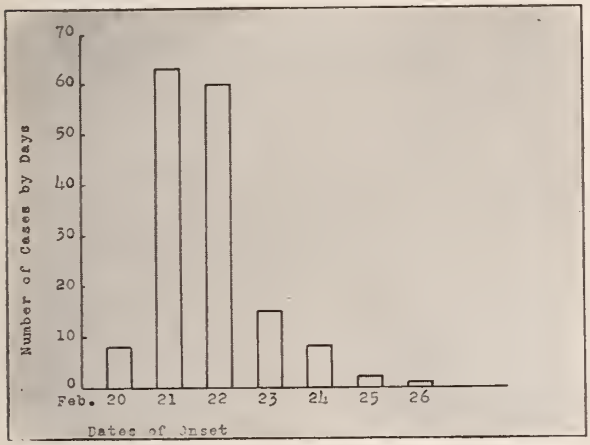
*Read before the Section on Hygiene and Public Health at the Seventy-first Annual Session of the Mississippi State Medical Association, Jackson, April 19, 1938.

Distribution of Illness As to Area

of the intersection of Highway 61 and Sunflower Road or within two blocks of it and east of the interseciton of Highway 61 and Sunflower Road for a distance of one mile to its end and one block west of this intersection (Figure II). There was a total population of 366 people receiving water from the Sunflower water main and its laterals. Of these 157 or 43 per cent, were ill. In the affected area, 52 per cent of those living on Highway 61 and east of it were ill, while only 9.3 per cent of those living west of this highway and in the affected area were sick. Four cases were attacked who did not live in the affected area. Two of these cases visited in the affected area on September 19 and drank water there. The other two consumed raw milk from a dairy which drew its water from the suspected water main.

FIGURE I

Number of New Cases by Days of Onset.



Most of those living in the polluted area who were not sick gave history that they drank very little water or that they drank most of their water in the business part of town. Some of them noticed the odor of the water and drank none of it.

The dairies, S and B were in the affected area and obtained water from the suspected supply. One of these supplies 50 families and the other 28 families with raw milk. Eight of the families supplied by S dairy and six supplied by the B dairy living out of the affected area were surveyed. In these 14 families and 53 people using milk from these two dairies, two had the same type of illness at the same time as those in the affected area. From evidence obtained, milk could not have been incriminated as the source of this outbreak. Nine of the affected families used milk from their own cows, three used canned milk, three used milk from B. dairy, two used no milk, and four used milk from four other different sources.

The Cross Connection

A construction company was concreting Highway 61 through Cleveland. Water for concrete mixing was being used through a fire plug from the Cleveland main extending along Sunflower Road while paving was being done southward from Cleveland. Paving had previously been laid north from Boyle for about one mile. For this concrete work, water was pumped from a small bayou which had its source in Cleveland, the water of which consisted primarily of sewerage from the City of Cleveland. When the pipe line from the Cleveland main extending south and the one from the bayou pump at Boyle extending north neared each other, they were connected, evidently with the belief that the Cleveland water pressure was greater than that produced by the pump at Boyle. However, it was found that the maximum pressure in the fire plug of the City of Cleveland main was 50 pounds per square inch and that the pump at Boyle usually registered 125 pounds pressure. The company manufacturing this pump states that it was capable of producing 500 pounds per square inch. It was further found that the pump of the Cleveland water works usually operated until about eight o'clock at night and was started again between three and four o'clock in the morning. It was also found that the bayou pump at Boyle was kept in operation all night on the night of September 18. It is believed from these facts that the Sunflower main was pumped full of bayou water through the cross connection and that this epidemic of illness resulted from consumption of this water.

Bacteriological Study

The history of a wide-spread epidemic of acute gastro-enteritis evidently spread through water, led to the belief that typhoid fever might follow. About two weeks after the first cases occurred the study was continued to determine if possible the predominating causative organism and to find whether any of those consuming the water were developing typhoid fever. Sixty-seven of those who were ill and eight who were not ill supplied stool and urine for cultures. From the stool of one person who was not ill, B. Morgani were isolated. This organism was non-pathogenic for white mice.

Of the stool specimens from the 67 who were ill, six showed the presence of B. Morgani, seven Morgani-like bacilli and two Flexner dysentery bacilli. Some of these organisms were pathogenic for white mice. B. Morgani were also isolated from the water taken directly from the bayou at a point from which the water was pumped.

Stools of nine individuals in whom diarrhea persisted for more than two weeks were examined for the presence of Entamoeba histolytica but no cysts were found. It would be interesting to know whether many of these individuals show at present the presence of Entamoeba histolytica after several months have elapsed for development of the amoebae. On February 15, 16, 17, 1938, 106 of those who had been sick were examined to find whether amoebiasis had developed. Of those examined, five were found to have Entamoeba histolytica and 10 showed the presence of Entamoeba coli. Craig says that a single examination will locate E. histolytica in only 35 per cent of those actually harboring the parasite and that at least 10 per cent of the population in Mississippi harbor the parasite either as cases or as carriers. Therefore, one cannot say from the above fact that the amoebae found have any relationship to the water-borne outbreak of gastro-enteritis.

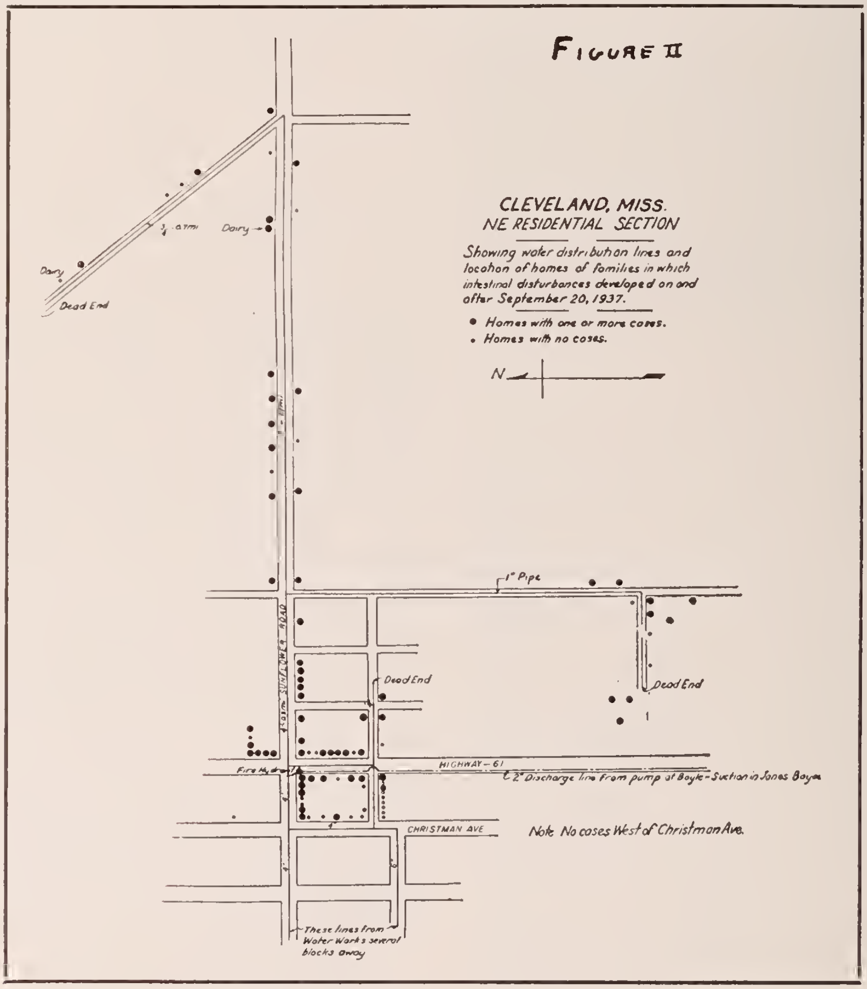


FIGURE II

CLEVELAND, MISS.
NE RESIDENTIAL SECTION

Showing water distribution lines and location of homes of families in which intestinal disturbances developed on and after September 20, 1937.

- ● Homes with one or more cases.
- • Homes with no cases.

N
Dairy
Dairy
Dead End
SUNFLOWER ROAD
1" Pipe
Dead End
Dead End
Fire Hydrant
HIGHWAY – 61
2" Discharge line from pump at Boyle-Suction in Jones Bayou
CHRISTMAN AVE
Note No cases West of Christman Ave.
These lines from Water Works several blocks away

Summary

A water-borne outbreak of gastro-enteritis is described caused by a polluted public water supply with evidence indicating pollution due to a cross connection. One hundred and fifty-seven of 366 people living in the area supplied by the polluted mains were attacked. Symptoms were primarily abdominal pain, nausea, and profuse diarrhea lasting for from 24 to 72 hours or longer. The epidemic began Sept. 18, reached its peak Sept. 20, and ended Sept. 15.

All of the cases lived along Sunflower Road or within a few blocks of this road except four who lived in other parts of town but gave history of exposure in the polluted area. Outside the area as shown on map, no cases occurred unless water or milk from the polluted area had been used.

The epidemic was apparently the result of a cross connection by which sewage-polluted water was pumped into the main through a cross connection. Of those ill, stool and urine of 67 were examined two weeks after onset. Several specimens showed the presence of B. Morgani, and two showed Flexner dysentery bacilli. Nine of those in whom diarrhea persisted were examined for Entamoeba histolytica three weeks after onset of their illness, but none of these were found to have amoebae at that time. Of 106 of these patients examined in February, 1938, five were found to have Entamoeba histolytica and 10 had E. coli.

DISCUSSION

Dr. O. E. Ringold (Cleveland)

I was particularly impressed with Dr. Gray's paper, and I very much enjoyed it. The point that I was most impressed with was that of his percentage of positive amoebae. I have come to the conclusion that there were from 15 to 20 per cent subjected to direct infection in that area. One of the near-by clinics reported the other day that for 1937 they found the percentage was 19.13 positives on the routine cases that came into their clinic. We have found practically the same percentage.

With the Entamoeba infection in Cleveland, from the direct sewage connection into the water supply, it is reasonable to suppose that there will be a great increase in amoebic infections there in the near future. Why there were only five out of 106 cases that were examined in February of this year by Dr. Gray, I do not know. Dr. Craig of New Orleans is of the opinion that there is at least 10% positive amoebic infections in the State of Mississippi. It is possible that the cysts have not gone through their cycle of development, and if Dr. Gray will run up there in the very near future and run some more tests in those families I think their percentage will be much higher.

Another thing is we have found these tests have to be made on the very fresh stool. If the patient is asked to bring a stool to the office or send it to the laboratory the chances are it is going to be negative, but if the patient is at the laboratory at the time the stool is taken, then it is more likely to be postiive. I enjoyed this paper very much and I enjoyed being here.

H. A. KROEZE (JACKSON): This paper interests me for the reason that it tells how vulnerable any water supply is to contamination, and that it also illustrates the old adage that eternal vigilance is the price of safety.

In the particular case of the Cleveland public water supply it is about as safe a supply as can be found where the water is derived from underground sources. It consists of deep wells, two reinforced concrete above ground reservoirs with reinforced concrete tops, the water being taken from the reservoirs and pumped into the distribution system with the excess going into an elevated tank. It is a completely enclosed system. Yet we have an outbreak of dysentery affecting a large number of people due to a cross connection with such a water supply.

In looking over the report of the waterborne outbreaks of disease in the United States and Canada for the years 1930-1936, I was impressed by the large number of epidemics in these two countries due to untreated ground water supplies. Out of 203 epidemics during this period of time, 66 were due to water supplies which are drawn from underground sources.

According to the information available, when the construction company was paving Highway 61 through Cleveland, they purchased water from the city, taking it from a fire plug in their own lines laid along the highway. As they completed their work south of the city, they moved their crew to Boyle and worked north. The connection to the fire plug in Cleveland was left intact. Presumably, there was a gate valve somewhere on this line. As the construction company worked north from Boyle, they used water from Jones Bayou, laying lines along the highway from their own pump at the bayou. The evidence indicates that somehow the two lines were connected as the work progressed north from Boyle. Even though a gate valve existed on the Cleveland line and this gate valve was closed, there would have been a possibility of infecting the Cleveland water supply because a single gate valve is not sufficient to insure the proper separation of the two waters. Experience has shown that a single gate valve connection between a potable and non-potable water supply is a potential hazard because of the fact that one can never be sure if the gate valve is fitting tight. Particularly does this hazard increase if the non-potable water supply is under greater pressure than the potable supply. In this particular case we know the pressure on the polluted water supply side of the valve was at least two and one-half times as much as the pressure on the city side. It is reasonable to assume, therefore, that whether or not the gate valve was open there was a good possibility of the city water supply becoming polluted after the two lines were connected. There is some question in my mind as to the responsibility of the city in this matter, but I do think the city was somewhat negligent in allowing the connection to their fire plug to exist after the construction company had completed their work through Cleveland. It existed there for some time and some employee hooked the two lines together and damage resulted.

This leads to the point that our city officials need to give more attention to the qualifications of water-works employees. I know through my official duties that too often to the victor goes the spoils, and when a new administration comes in, often the old crew is kicked out and a new one goes in. As a result it is very difficult to try to train and maintain our water-works superintendents throughout the state to have a real appreciation of the fact that water can transmit disease and to be ever alert for any condition that might arise that might endanger the sanitary quality of the public water supply. I feel that in this particular case, had the water works man been cognizant of the danger that might exist with this connection remaining in the fire plug after the work was completed at Cleveland, this epidemic might not have happened.

I think the county health department is to be complimented on the rapidity with which they went to work and cleared out the infected lines. I understand that when first they became aware that something was amiss they dosed the reservoirs with a very heavy dosage of chlorinated lime and flushed out the entire system. Then they broke into the main out Sunflower Road and introduced a large quantity of chlorinated lime to disinfect all of the pipes from that point outward and I think this disinfection of the system helped keep down a large amount of illness. The Sunflower Road main happened to be a dead end line going out about two and one-half miles. The case study shows the infection only spread one block toward town from the corner where the connection was made, indicating that the pressure on the bayou pump side was great enough to force water back toward the safe side of town.

A bacteriological examination of the bayou water showed colon bacilli in the amount of 22,000 per 100 c. c. of water. The chemical examination showed excessive free ammonia which is indicative of recent organic pollution. Jones Bayou has served for years as the natural sewer outlet for the city of Cleveland with a large amount of sewage both raw and and septic tank effluent going into the bayou. Fortunately now the city has a sewage system and a modern sewage treatment plant, and I believe considerable pollution will be removed from the bayou as connections are made to the sewers.

I feel that it is the responsibility of all of us to give some attention to the matter of cross connections. We have a number in the state at the present time between public water supplies and supplies of industrial plants which are unsatisfactory. A single gate valve between a non-polluted and a polluted supply is not sufficient assurance that the two supplies will not mix, but particularly if the pressure on the polluted side becomes greater than that on the non-polluted side.

Dr. Gray (Closing): There are two or three points that I would like to emphasize. I think Dr. Ringold was perfectly justified in his surprise at not finding any higher percentage of amoebic dysentery in this group of individuals. There are two things that will account for this low percentage of laboratory positives: (1) specimens examined were several hours old in which nothing but cysts could be found; (2) after one has swallowed amoebae, one may develop symptoms of amoebic dysentery in from a few days to a few years. Therefore, repeated examinations in the future months will probably reveal many other cases of dysentery.

Another point of importance is that chlorinating the water supply, as I understand it, has nothing to do with cysts in the water.

I want to thank the gentlemen for their discussions.

Modern Concepts in Psychiatric Medicine*

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It has been said that man's ultimate destiny depends not upon whether he can learn new lessons or make new discoveries and conquests, but on his acceptance of the lessons taught him close upon two thousand years ago. This aphorism would seem particularly adapted to the modern practice of medicine and its scientific concept of disease. The sons of Aesculapius and Hippocrates have strayed from the precepts of their fathers and have permitted instruments of precision and laboratory tests to supplant the subtle art of understanding that sensitive, reactive creature, man. They have allowed their visions to be obscured by technical, bacteriological and pathological detail and have neglected to develop their sense impressions which have in the past led to such a wealth of correct knowledge about living organisms. They cannot see the woods for the trees; they do not see the sensitive, frightened, quite human individual because they are dazzled by the signs and symptoms of disease. The treatment prescribed is not infrequently based upon what the patient ought to have in light of certain scientific formulae, rather than upon a careful analysis of the psychological outlook inculcated into him during early childhood and adolescence, nor is a sympathetic study made of his ambitions, disappointments, social milieu, environmental influences, emotional equipment and effective reactions. Medicine as a science has made marvelous progress in the past few generations, but the art of medicine has retrogressed and because of this doctors often make invalids of their patients both by what they say and by what they do.

Plato said that medicine is an art which considers the constitution of the individual and has principles of action and reason in each case. The old family physician accepted these precepts and learned that no two people react to disease in exactly the same way; one puts up a stiff resistance, another yields supinely; and that each individual reacts in his own peculiar and very personal manner to the same disease. Scientific medicine has attempted to formulate a hypothesis that this unique reactivity of a given individual is due to a disturbance in the functioning of those mysterious structures, the glands of internal secretion. A less scientific, but perhaps more accurate explanation, was furnished by the Great Physician some two thousand years ago when he stated that "as a man thinketh in his heart, so is he." If the patient be honest, courageous, and has the desire to live, he may retard the ravages of a malignant disease; if he be frightened and apprehensive he may succumb to a trivial malady. But if the patient be maladjusted, dishonest or covetous, he may surround a minor ill or accident with such an overwhelming array of physical and psychic phenomena that his family and friends will be filled with awe, and the modern scientific physician with apprehension and concern. It is questionable whether instruments of precision will ever be devised that will properly evaluate this imponderable quality of mankind or furnish a better explanation than "as a man thinketh in his own heart, so is he."

Interest in the patient himself and the unique reactivity of his body structures and organs to emotional and psychic influence became more apparent during the years immediately following the World War. The almost limitless variety of symptoms displayed by the so-called shell-shocked victims were most confusing to those trained only in clinical medicine and caused many diagnostic mistakes, as well as errors of judgment in estimating their degree of disability. The importance of psychic and emotional factors in disease could no longer be denied and the literature on the subject abounded with such observations as that made by a leading medical educator who stated: "The symptoms and even the laboratory observations may be the same in two cases, yet one may be organic and the other functional. Every surgical clinic affords proof of the errors arising through this mimicry, and every practicing physican has regretted experiences that prove to him the fallacy of the ordinary criteria of disease. What can help us in such a doctor's dilemma? Perhaps that heaven born gift, intuition, the subconscious psychologic insight which comes to us when we study the patient personally."

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*Read before the Section on Hygiene and Public Health at the Seventy-first Annual Session of the Mississippi State Medical Association, Jackson, April 19, 1938.

This observation, together with many other similar expressions emanating from the pens of recognized leaders in the profession, was largely responsible for the recognition and acceptance of psychiatry as an integral and indispensable part of medicine.

The dissemination of shell-shocked victims throughout the country should have given the public a new concept of the frequency of emotional instabilities and their far-reaching effects on the human body. But facts are relentless and it must be admitted that instead of the public readjusting their views to this new concept, they continued to retain their old ideas about emotional instabilities and lunacy being synonymous and that such disorders were always inherited and therefore a family disgrace. There is no evidence to demonstrate beyond dispute that mental disease in the parent has been handed down to the child by direct transmission. Even the followers of the Christian religion whose doctrine is that God gives each individual a soul or mind that is not handed down from his ancestry cling tenaciously to the superstitious belief that mental traits are inherited. But a superstition that has been so deeply inculcated into each generation for the past two thousand years will not yield to logic or reasoning within a few decades. Many physicians were influenced to forget their war time experiences and resumed their former habits of treating symptoms instead of the patient. The leaders of the business, industrial and educational worlds seemed to be of the opinion that with the cessation of hostilities in the World War the human race again became so stabilized that nothing short of the strain and stress of another war would affect the equilibrium of its individual members. Perhaps the lessons taught by the World War were too recent to be accepted, perhaps they did not believe history would repeat itself. But history did repeat itself and within an amazingly short time. The stress and stain engendered by the economic depression circumambiented the entire population and became more devastating than that attendant to the World War.

The number and variety of physical symptoms produced by stress and strain that has been exhibited by so-called strong personalities of every sex and age during the depression forcibly recalled earlier experiences with the shell-shocked veterans and accentuated the indispensability of psychiatric training in the every day practice of medicine and surgery. In this emergency a larger group of psychiatrists were available than during the World War and their success in treating physical disorders resulting from emotional distress created such widespread interest that psychiatry has eclipsed her sister specialties in popular favor. The long established reputation of psychiatry being an apparently futile effort can no longer be sustained. The recent accomplishments with irritative therapy in dementia praecox and thermal therapy in general paresis equal those in any other field of medicine and definitely place psychiatry among the more progressive arts. When one realizes that each brain cell is the keystone of some phase of human behavior, that the interplay of forces entering into existance depends upon the uninterrupted cooperation of these cells, in a word, that the brain controls every function of the entire body and life itself, and that the mind is the master engineer who has supreme power and control over every individual adjustment and purposive act, then the aphorism "as a man thinketh in his own heart," becomes vitalized and assumes major importance for those who would understand or interpret or direct the reactions of human beings in health or disease.

It has long been conceded that the body performs its functions through the integrating and co-ordinating activities of the central nervous system. A great network of neural pathways and centers unite the component structures of the body in a collective functioning group, under the cortex of the brain, in which the guiding and purposive activities of the mind abide. Through its afferent or sensory neurons, the central nervous system brings the body organism into relation with its own structure, and with the outer world. The efferent or motor neurons make possible the various activities and modes of expression that distinguish the psychic and bodily functions of life. Emotions, thought, perception, sensibility, motility, metabolism, as well as the subtle chemical changes underlying secretion and glandular activities, are all manifestations of the various physiological and psychic levels of the nervous system in its role of centralizing and controlling the psychobiological and psychochemical activities of the human organism. The nervous system is composed of a closely related series of ascending functional levels, in which the vegetative system is the oldest and the cerebral cortex is the most recent in development. Between these two extremes of function lie the various reflex centers of the spinal cord, the brain stem, and the great ganglionic masses of the interbrain and forebrain. These various structures are united by numerous influences on the lower level, and as the psychic level is the highest in functional importance, it has supreme power of control and guidance over all other levels of the nervous system. This being true it is not difficult to understand why a mental maladjustment should cause disorders in other portions of the nervous system controlling visceral and bodily function. Moreover it has been generally accepted that a strong emotion generates neural energy that in turn becomes converted into various somatic or abnormal channels and motivates symptoms simulating very closely the clinical picture of organic bodily disease. When this displaced neural energy flows into abnormal mental channels it finds expression in compulsive acts or thoughts, phobias, tics, tremors, paralyses, hysterical manifestations, and psychic explosions. The frequence with which this neural energy overflows into abnormal mental channels is realized when one recalls the number of patients seen during the economic depression whose symptoms resulted from emotional conflicts.

It has long been suspected that neural energy is in reality a form of electricity but until the advent of the radio and the fabrication of its amplifiers we had no available method that would demonstrate the electrical nature of the current generated by the brain or measure its strength. With the aid of these amplifiers it has been made possible to devise an electroencephalogram with an amplification of four hundred billion or more that not only demonstrates the electrical energy generated by the brain and measures the current flowing over the great network of nerves to the various organs of the body, but it also makes possible to demonstrate whether a disorder of the brain or other viscera is a result of a pathological process or is the result of a disturbance in the generation and flow of the electric current which governs the functional activities of the organ affected. A clearer understanding of how the brain, through the great network of neural pathway and centers, makes possible the various activities and modes of expression that distinguish the mental and bodily functions of life is being brought about by the electroencephalogram. The electroencephalogram has also demonstrated the variations of the electrical energy generated by the brain during strong emotional disturbances, headaches, epilepsies, mental disorders and other affections of the brain.

Now that the electrical nature of neural energy has been demonstrated, it becomes apparent that we must discover the methods by which this electricity is generated. Since alterations in the flow, composition or constituents of the blood caused by the administration of chemicals or other agents, through external, biologic, biochemic and other channels may produce a variety of psychic or neurological manifestations and even death, it is reasonable to assume that the blood and its vessels play a dominant role in the production and generation of this electrical energy. It is possible that the uninterrupted flow of the blood through its vessels produces a friction similar to that which generates static electricity. The electroencephalogram has revealed that the amount of electrical energy generated in the brain depends largely upon its oxygen supply. It is known that the need of the nerve cell for oxygen is overwhelming in comparison with the needs of any other tissue of the body. The brain represents two per cent of the body weight, but it accounts for ten per cent of the total body consumption of oxygen and the brain cortex consumes about ten times the amount required by the white matter. The nerve cells, which are chiefly responsible for the consumption of oxygen, represent one or two per cent of the total volume of the brain; hence a small amount of brain matter makes a very great oxygen demand. At the ninety-sixth annual meeting of the Royal Psychiatric Association of Great Britian it was stated that attempts to find the oxygen consumption of a stimulated brain and an inhibited brain showed enormous variations. This problem was studied by using the temperature of the brain in different parts as a check on the amount of blood flowing to that part, by means of thermoelectric couples inserted into the brain. An animal poisoned to the point of complete anaesthesia by phenobarbital had its oxygen consumption reduced by twenty per cent; when barbiturates were used the reduction was thirty to forty per cent. An animal undergoing strychnine convulsions consumed seven hundred per cent more than a resting animal; with cocaine the percentage was one hundred and twenty. It was also found that there is a large variation between the oxygen consumption and the CO_2 given off at different parts of the brain, and that seems to depend primarily on the presence or absence at the part of the synapses, where oxygen consumption is very great. Apart from the observations of Pfeiffer on the human cortex, little has been attempted in the way of measuring the relative vascularity of the human brain.

It has been established, however, that oxygen is conveyed to the brain through the medium of the blood stream and that a number of mental or nervous manifestations may result from an ischemia or any disease or disorder of the cerebral vascular system that interferes with the circulation of the blood. These considerations indicate that both the blood and its vessels play a role in the generation and distribution of neural or electrical energy and suggests that patients who are afflicted with nervous or mental disorders should be treated as suffering from a vascular rather than a nervous pathology. They would also indicate that many of the functional disorders observed in the various structures and viscera of the body result from an interference in the flow of neural or electrical energy which controls their functioning. It is also suspected that there may be a circulation of chemicals in the brain which react unfavorably and produce a certain group of symptoms when an oxygen deficiency occurs. And thus research is being conducted in every field of art and science that offers any promise of a better understanding of that sensitive creature, man, and the unique reactivity of his body structures and organs to environmental and emotional influences. It, therefore, becomes obvious that psychiatry has escaped from the metaphysical control which retarded its progress for several hundred years and is justifying the public and professional favor that it is being accorded.

Medical Arts Bldg.

DISCUSSION

Dr. F. A. Donaldson (Whitfield): I enjoyed Dr. Ownesby's paper very much. It is another step forward and we are trying to get away from quacks and quackery, and the pyscho-analysis of psychiatric patients. We think we are coming down to earth on it. We are doing some work at the hospital that we think we are getting results with. It is not sensational, except in new shock treatments. We are not using the insulin treatment, which is prohibitive to us, because it costs too much. Over a long period of time, the results obtained from it according to the statistics are not as good as those resulting from the metrazol treatment, which we are using at this time.

Another one of the treatments we are trying to use now and are getting good results with is theoforin. We find by giving large doses of this we shorten their stay in the hospital, and we are lowering the incidence of suicide and we think we are getting somewhere along that line. We find that by giving them 3½ grains of sodium amytal intravenously they will usually eat and this can be carried still further and give 7½ grains and later give them an ampoule intravenously and they will talk. This may be just another one of the shock treatments and the reaction to that from the shock, any way it is working. We do not offer that as a cure, but merely as a way to helping them, and it is working very nicely in all the patients we have used it on.

The metrazol treatment we feel is coming through very fast. We have not been using it long enough on our patients to get any definite statistics on it, but will say that all are reacting to it very nicely at this time. I want to say again that I enjoyed Dr. Ownesby's paper very much.

Dr. Estelle Magiera (Whitfield): Dr. Owenesby is to be complimented on his excellent paper. I was specially interested in his comments on metrazol, and I think in this connection it might be of interest to report the cases which are now under treatment at the Mississippi State Hospital. We now have under the metrazol therapy nine cases, but unfortunately all the cases which we get in the state institution are chronic, so the group which we are treating is chronic. By that I mean the psychosis is at least one year or more.

Dr. J. S. Hickman (Meridian): I was not selected to discuss this paper, therefore I could not be prepared to make such a talk in keeping with the one just listened to. I do say though, it is my privilege to be acquainted with Dr. Ownesby and his work. He happens to have had the leading part in organizing the Southern Psychiatric Association, and is now secretary and treasurer of it. This association is a selected group, and I feel we get more real information from it than could be possibly secured elsewhere. I had the pleasure of being associated with him at one of these meetings and hearing a paper of his at that time, which was enjoyed.

Dr. Ownesby is a man ahead of his time, along the line of psychiatry. But, it is, nevertheless, a good thing for us to trail along behind him. I certainly enjoyed hearing his paper and the discussions following it by Dr. Donaldson and the "lady doctor."

I feel I would be shirking my duty if I did not arise and discuss this paper, when I am responsible for the care and treatment of more than one-third of the white people who are admitted to the mental hospitals of Mississippi. Therefore, in response, I whole-heartedly agree with the metrazol treatment.

I would like to say for the benefit of our mental hospitals and those present who are interested in this treatment, that the attorney-general rules that we do not have to secure the permission of the family or guardian to give this treatment. I mention this fact, because oftentimes this would delay the treatment for weeks and keep us from giving the treatment in the infancy of the disease.

We have treated eight cases at the East Mississippi State Hospital with metrazol, and have not had any untoward effects with any of them. None has received what we would call a sufficient amount of treatment to determine a full decision about it. Therefore, I am not giving out any definite statements.

We treated one patient of three years' standing—a lady, 26 years of age, who was full of delusions and the most miserable patient in the hospital. She imagines she has swallowed the world and ruined every one connected with the world. After giving her three shots of 10 per cent solution of metrazol, she lost all the delusions and is very happy and normal at this time.

We are treating other cases, as stated; mostly dementia praecox, catatonic type, who have been with us but a short time. One is a girl 22 years of age, who had failed to take her food normally or speak a word in three weeks. After her first shot of 4 c.c. of 10 per cent solution of metrazol, within one hour she was up, in the kitchen preparing her own meal, which she ate heartily, and talked freely about it. However, she returns to her catatonic stage when the treatments have been left off sixty hours. I appreciate such results as this, compared with the past treatments. The remaining number of the eight cases treated, have made some response towards recovery.

I again want to thank Dr. Owensby for this paper, and I want especially to thank the medical association for the interest they are beginning to take in the mental sickness, as I feel the medical doctors should realize the need of their acquaintance with this branch of medicine. I even find doctors who are psychotic, as much so as any other profession.

Again, I thank you for the opportunity for this discussion.

Bertie A. Jones, R.N. (Whitfield): I wonder if I may be allowed to say one word? In this treating by metrazol, it means a lot to the nurses, even though the patient is not cured. It has a lot to do with the nurse in that it cuts down the nursing problem. In recent work that I have had in the East in White Plains, New York, and particularly in the Brooklyn State Hospital, they were very pleased with it. They said they did not claim a cure for all of them, but it lessens the nursing problem because those patients who had refused to eat and who had to be tube-fed, and those who were untidy (soiled and wet themselves), after a few treatments began eating regularly and were neat in person.

Dr. B. L. Schuster (Pass Christian): I would like to learn whether Dr. Owensby is using metrazol in any other mental cases, and if so what results he has had.

Dr. Owensby (closing): I am deeply grateful for the friendly consideration given my humble effort. Without meaning to be presumptuous, I should like to correct a slight lapsus linguae made by Dr. Donaldson. He, unintentionally, I am sure, stated that the convulsive seizure, following the administration of metrazol, lasted 45 minutes instead of stating that the seizure lasted 45 seconds. The convulsive treatment of dementia praecox is being accorded a very favorable reception and it is of interest to learn that your own state hospitals were among the first institutions in this country to investigate the merits of this treatment.

In reply to Dr. Schuster's inquiry, the convulsive treatment of dementia praecox is claimed by its originator, Dr. L. von Meduna, a psychiatrist of Budapest, to be the result of intensive research based upon a previously conceived hypothesis that a certain biochemical antagonism exists between the convulsive state and the schizophrenic process. Without having any previous knowledge of its being used in other psychoses and neuroses, I extended its scope to include all of the so-called functional psychoses, such as manic-depressive, menopausal, etc. The alleviation of the symptoms in these cases has been sufficiently gratifying to suggest that this mode of treatment may be helpful in other mental maladies than schizophrenia. I am convinced, however, that neither the medicament nor the convulsive seizure are curative agents but merely adjuncts to help the patient emerge from a pathological mental state until the necessary psychiatric procedure can be employed to restore his mental equilibrium. Moreover, it is my profound belief that any attempt to secure a prolonged remission without the use of psychiatric procedure is as unscientific as an attempt to perform a surgical operation without regard for aseptic procedure. Each patient should be given a painstaking physical and laboratory inspection before the administration of this treatment and none should be allowed to receive it who present evidence of an organic disease. The average time required for the administration of the convulsive treatment is from six to eight weeks. The earlier cases of dementia praecox show a greater percentage of remissions than do these of two or more years duration. In over one thousand induced convulsive seizures, I have not observed any deleterious effects resulting from this mode of treatment. May I again express my gratitude for your kindly reception of my remarks.

384 Peachtree St., NE.

* * *

Certain Problems in Treating Fractures*

H. EARLE CONWELL, M.D., F.A.C.S.†
Birmingham, Ala.

The necessity for improved fracture treatment has been demanded in the last few years by the increasing number of fractures and their disabilities resulting from industry, automobiles, aeroplanes, and other technological changes. Even though many safety first methods and precautions have been introduced to lower the incidence of accidents, we can never entirely eliminate them, due mainly to the element of human carelessness. The aim of treatment is to expedite a complete recovery of function, which is best attained when the procedures run in harmony with the natural processes; that is, with powers of resistance, growth and repair.

The proper procedures in the early history of fracture treatment and the immediate recognition of all local and general pathology are important. Immediate splinting of the part involved regardless of the certainty of a fracture should be done. "Splint them where injured," thereby preventing unnecessary local trauma and shock. The benefit of splinting a fracture before transportation is attempted was demonstrated forcibly during the World War when the mortality rate was reduced in compound fractures of the femur from nearly eighty per cent to sixteen per cent after adoption of this procedure. The splinting should be the simplest, most effective and most easily applied. Usually the simpler the splint the easier the application. In every case the joints which are proximal and distal to even the suspected fracture should be splinted.

The type of treatment depends on the individual case. Each fracture with its complications is a law unto itself, demanding individual common sense surgical judgment. The splinting treatment should be adaptable to the fracture, the fracture must not be adapted to the treatment and splint.

We do not believe that a standard method for treatment of fractures in every case is possible. Not until every type of fracture can have the same bone and soft structure involvements, the same external force producing it, occurring in patients of the same age and having the same general physical conditions with the same resistance or recuperative power, can we hope to standardize the treatment of fractures. If this could be possible, treatment of fractures would probably cease to be a science and would not demand our own common sense judgment and expert opinion.

Too frequently are superficial and careless physical examinations made, the results being that fractures are often overlooked. Certain cardinal physical signs are not always necessary to indicate a fracture. This is especially true in fractures of the spine where a patient may receive a slight or moderate fall on the buttocks, and afterwards suffer very little or no pain whatever in the spine, but when roentgenograms are taken a compressed fracture of one or more vertebrae is seen. A lateral roentgenogram of the spine, when one suspects any bone involvement, should always be made. We should always be suspicious of a fracture of the spine in even the slightest injury, directly or indirectly, to the back or buttocks.

In contrast to the above the case is presented which comes to the hospital unconscious as the result of a head injury, badly shocked, and showing every evidence of brain trauma. This patient should be treated symptomatically as a severe brain injury irrespective of bone findings. In cases of this type a roentgenogram frequently does not show a fracture of the skull. As a matter of fact roentgenograms in this type of case are not always immediately necessary for the proper treatment of this patient. Too often are patients with injury of such type moved to get roentgenograms, causing more damage than there is good derived from the knowledge obtained.

Roentgenograms, when possible, with anteroposterior and lateral views, should be made before attempting the reduction of a fracture. Following the reduction these same views as well as other roentgenograms at different intervals during convalescence should be made. These are not only necessary for checking up the position and union of the fracture, but as a protection and record for the doctor treating the case. When fluoroscopic examinations and reductions are done roentgenogram checks should also be made because fluoroscopic examinations cannot be recorded; such procedure, therefore, does no good before juries. Fractures can not be treated by roentgenograms alone. The reduction of a fracture constitutes only one of the important processes in its treatment.

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*Read before the Central Medical Society, Jackson, Sept. 6, 1938.

†From the Sherrill and Conwell Orthopaedic Clinic, Birmingham, Alabama.

Relaxation during the reduction of a fracture is demanded. This relaxation can be accomplished by continued traction, massage, spinal, local or general anesthesia, each one having its individual indications and advantages; however, no one method is to be used in every case.

Local anesthesia has taken a definitely indicated place with fracture work today, but it must not be used indiscriminately. It is not a panacea by any means. Harm can result from its use even though the enthusiasts say they have never had any trouble. The author prefers a one per cent novocain solution for local injection.

The procedure of molding or kneading around fractures after injecting novocain or even when using general anesthesia in fracture reduction, especially about the ankle joint, seems to the writer a very dangerous procedure, being conducive to the formation of emboli and thrombi. Why bring about further trauma to already traumatized tissue as well as forcing traumatized blood into surrounding normal structures? Deaths and complications have been reported from such procedures.

The majority of all fractures can be reduced by the closed manipulative method and immobilized by circular or bivalved plaster casts. When doing the closed reduction, care must be taken that no serious trauma is caused. Repeated attempts at closed manipulative reductions are not necessary before making a decision as to whether the continuous traction or open reduction technique is to be carried out in an individual case. Such type of treatment by the closed method is not a conservative but a radical method of fracture treatment.

We believe that frequently more surgical judgment and care are demanded of the surgeon to be able dextrously to reduce a fracture by the closed procedure than by the open method. The surgeon who knows the anatomy, pathology and mechanics of the parts involved, the knowledge of which in the treatment of fractures is imperative, is able to do a closed reduction with the minimum trauma. He is a more able surgeon than one who cannot give such advantages, causing the patient to be subjected to unnecessary traumatizing closed reductions or open operative methods. Too tight bandage, splints or casts must never be applied. Frequent observation during the first few hours following the reduction of a fracture and every few days, thereafter, should be made. In any fracture living tissue is involved whether it be bones, muscles, ligaments, nerves. or blood vessels, any or all of which demand frequent attention, and without this observation undesirable results will usually occur. Fractures must not be tampered with too often; palpate only when necessary, but observe frequently.

The knowledge of the physiology of fracture repair and the surrounding soft structures is imperative. If we forget these we are not doctors treating fractures, but mechanics, and will soon be in ill repute. We must also treat the general condition as well as the local pathology. Not infrequently examinations will show the cause of a fracture to be a certain bone pathology indicating a local manifestation of some constitutional disease existing before the fracture occurred.

There is now a wave of enthusiasm regarding the ambulatory treatment of fractures. No one believes in earlier motion in the treatment of fractures than the writer, but the laws of Hunter and Hilton on rest and immobilization must not be forgotten. Too early weight-bearing frequently brings about excessive painful callous formation and in certain instances non-unions and permanent disabilities. In certain fractures about the ankle joint where very little bone involvement and no displacement or any possibility of a displacement of the fragments, early weight-bearing soon after injury may be allowed provided a plaster splint and walking iron have been properly applied, and when supervision can be carried out frequently under ideal and controlled conditions.

The writer has concluded that the patient in the majority of such instances fortunately will control the over enthusiastic doctor who forces too early weight-bearing of the ankle and leg fractures, because of the pain which he encounters when carrying out such an early weight-bearing. The common laws of nature generally will cry out for help against the faddism which is too often practiced by some members of the medical profession.

Even though the majority of fractures can be treated by the closed reduction method with fixation in some form of plaster splints or casts, with as early motion as is permissible, it is the minority in number which cannot be treated with this method and which usually make the majority in trouble. This minority demands, in most cases, our best judgment and opinion and represents probably the greatest difference in the proper and improper ways of treating fractures, resulting in the difference between excellent and poor results.

Skeletal traction treatment, which has usually been classified in the past as conservative, appears to the writer to be rapidly becoming a radical treatment. Too frequently are its limitations and indications being abused. The medical profession should not become over-enthusiastic regarding the skeletal traction methods, and assume that a panacea has been found for the treatment of all fractures. The writer still advocates and practices the use of skeletal traction in selected cases which in his opinion are ideal, and when indicated, application should be carried out without hesitancy. Rarely, if ever, are these selected cases in children due to possible epiphyseal injury.

Skeletal traction has saved many extremities when properly used. The method demands close observation, and patience. In the majority of instances, if used when indicated, good results will be obtained. Indiscriminate application of foreign material through the medullary canal should not be practiced. I prefer the Kirschner wire in the majority of instance due to its small size and its ease of application.

Too prolonged traction should be guarded against because it brings about a varied period of temporary muscular paralysis which is difficult to overcome at times, and also, when using skeletal traction for too long a time infections are more liable to occur around or along the course of the wire or pin. As soon as alignment is restored and sufficient callous has formed and when some type of external fixation can be applied, the skeletal or adhesive traction should be removed.

Open operative reductions when indicated should be done without hesitation. The indications, however, for open operative reductions before first trying to do the reduction by the closed or traction methods are few. It is not necessary to discuss the technique of different types of internal fixation except to say that as in all other methods of fracture treatment the surgeon should use that recognized standard method with which he is most familiar and if not familiar with such methods proper consultants should be obtained.

Too early weight-bearing after removal of all fixation, especially in fractures of the ankle or knee joint should be guarded against. Frequently fractures of the knee joint during early convalescence do not show any instability, but if walking is allowed too soon without a support, become unstable. The same is true of ankle fractures.

One of the most important physical agents to use in fractures is exercise. The muscles of the body are expected to work together in the coordinative movements which we use in our daily ordinary work and they will work together when there is a purposeful nature in the exercise. Therefore, occupational therapy is probably the best exercise and is of the greatest value. Even without expert directions the surgeon can with a little ingenuity use occupational therapy.

One's ability as a surgeon in treating fractures is not determined entirely by the method or methods of treatment which he uses but by the functional results obtained. The doctor behind the treatment is most important. Frequent observations during the convalescent period of a fracture are essential. The surgeon who reduced the fracture should realize that it is not beneath his dignity and responsibility to remove a cast or splint during convalescence and inspect an injured limb, and to reapply the splint, giving his opinion for future treatments. Good surgical judgment is just as necessary during the convalescence as at the time of the reduction.

Ultimate results to be attained and hoped for in any fracture are union, alignment and function. When all other factors are equal, perfect bone approximation is usually conducive to early union and restoration of function. However, the possibility of obtaining good functional results when good alignment is present should never be sacrificed merely to obtain perfect bone approximation, because a return to normal function is not always dependent on perfect bone reapposition. This is mainly true in shaft fractures but usually not so in joint fractures. Finally, function is not only dependent upon union and alignment but also upon full co-operation and determination of the patient to aid himself during convalescence.

The psychologic aspect of the patient with a fracture is an individual problem. A thorough understanding by the patient as to his condition should be explained by the physician and the patient assured that he will have an excellent chance to recover normal function if such is at all possible. Due consideration should be given to the compensation case who generally has a longer disability than the corresponding injury in another patient. Confidence of the patient in the physician is essential.

1023-S 20th St.

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Organized 1867

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Papers and news material for publication should be received not later than the fifth of the month preceding publication.

The editors are not responsible for statements made by any contributor.

Manuscripts and all material for publication should be addressed to the editor, P. O. Drawer 231, Vicksburg, Mississippi.

EDITORIALS

YOUR MEDICAL JOURNAL

The editor of the Mississippi State Medical Association has been wondering for a long time of how much real value the Mississippi State Medical Association section of THE MISSISSIPPI DOCTOR is to the members of the Association. Material is gathered, edited and published at considerable expense to the Association which means expense to the individual members.

If a man takes the time and trouble to prepare and present a paper at an annual meeting, his paper should be published. However, this is a small part of the work of preparing a monthly section in a journal.

There is only one way of determining the real feelings of the members and that is to ask, although in the past such requests for opinions have received scant attention or thought from the membership in general.

Accordingly on January 1, 1939, a letter was addressed to all members of the Mississippi State Medical Association asking advice and enclosing a return card for certain answers. Each member was requested, if he felt that a monthly section in the journal was desirable, to give his own personal ideas of what should be included to make it most interesting to **him.** If he thought it was just another journal to be laid aside unread, he was asked to be frank and say so. No signature was required.

To date approximately 300 replies have been received, generally representative of all parts of the state. It is planned to make a complete report to the House of Delegates at its next annual meeting. Meantime, it may be of interest to the membership to know something of how the membership feels in regard to certain phases of its official publication.

To the question, **"Do you read the Mississippi State Medical Association Section of** THE MISSISSIPPI DOCTOR? Two hundred and forty-three replied, "Yes;" one replied "No;" one, "Once in a while;" and one, "Some"; 223 stated that the section was read regularly, one fairly regularly, and one, not regularly; 66 stated that the section was read occasionally; three stated that it was never read. In addition one stated it was read usually; one, most of it; one rarely; one, seldom; and one, "Just another journal to be laid aside."

To the question, **"Do you like and read papers read before county societies?"** There were 291 replies. Of these, 240 or 83 per cent, definitely said, "yes" and 15 or 5 per cent said, "no." The other 12 per cent qualified their replies somewhat as follows: "regularly;" "at times;" "good ones;" "fair;" "if good;" "some (12);" "seldom (2);" "in my specialty;" "not often;" "few (2);" "yes, if the writers are experienced;" "sometimes (2);" "selected papers;" "occasionally (4);" "doubtful (2);" "most of them;" "if worthy."

To the question, **"Do you like and read county news?"** There were 289 replies. Of these, 248 or 86 per cent, said, "yes," and 26 or 9 per cent, said, "no." Four per cent replied, "some" or "occasionally." Less than one per cent stated, "not so much" and "not interesting."

Of 264 replying, 200 or 76 per cent like and read **"Interpreting Medical Literature;"** 36 or 14 per cent do not. The remaining 10 per cent qualify their answers os "good;" "regularly;" "tersely;" "yes, much;" "some (4);" "occasionally (8);" "some of it;" "yes, usually;" "at times (2);" "not much (2);" "fair (2);" "little;" "sometimes;" "it's great;" "in my line;" "questionable;" "no, except internal medicine."

One hundred and fifty-nine of 272 replying like and read "Hospital Staff Transactions" (58 per cent);" 67 (25 per cent) do not. The other 17 per cent qualify their replies as follows: "O.K.;" "regularly;" "a few;" "seldom;" "do not have time;" "not specially;" "terse;" "few;" "occasionally (12);" "sometimes (4);" "some (5);" "hardly ever;" "not much (5);" "at times;" "not very much;" "fair;" "not read much;" "some of them;" "questionable;" "if brief;" "frequently (2);" "yes, enjoy if well done."

Seventy per cent (195) of 278 replying like and read "Activities of the State Board of Health;" 18 per cent (49) do not. Qualified replies from 12 per cent (34) were as follows: "O.K. (2);" "seldom;" "very little;" "terse;" "I read them;" "occasionally (7);" "some (8);" "yes, usually;" "rarely;" "this read dutifully and perhaps in a defensive attitude;" "not much;" "fair;" "not read much;" "in part;" "personal aversion."

It would appear that a clear majority of those members of the Association replying favor what is at present being done to provide a journal. There were many further personal comments and suggestions which will be later presented. The editor is personally very grateful for many encouraging messages.

It is believed that the matter is an important one to the Association. Those members who have not returned the cards are urged to do so now in order that their ideas may be included before the final report.

DEATHS OF MISSISSIPPI PHYSICIANS, 1938

Recently the Mississippi State Board of Health has published a list of Mississippi physicians who died in 1938. Of those dying during the year, only three were under 50 years of age. Also of the three below 50 years of age, one death was due to accident and one to suicide. In other words, 92.2 per cent of deaths were in doctors above 50 years of age; 71.1 per cent were above 60 years; and nearly 40 per cent were above 70 years. The age groups:

Ages	Number	Per Cent
28 years	1	2.6
39 years	1	2.6
45 years	1	2.6
50 to 59 years	8	21.1
60 to 69 years	12	31.6
70 to 79 years	11	29.0
80 to 89 years	3	7.9
93 years	1	2.6

Causes of Death:

Diseases of heart and pericardium	7
Nephritis	6
Malignant Disease	4
Pneumonia	3
Cerebral accidents	3
Arteriosclerosis	3
Accidents	3
Diabetes mellitus	1
Gastric ulcer	1
Cirrhosis of liver	1
Encephalitis	1
Progressive spastic paralysis	1
Stricture of urethra	1
Tetanus	1
Senility	1
Suicide	1

As in previous years, it may be said that Mississippi physicians do not die young.

COPIED

Mrs. Brown: "You're looking very happy this morning. Have you some good news?"

Mrs. Jones: "Just wonderful! My husband has just had a nervous breakdown and we're going to Florida for the winter."

* * * *

A girl may wear a golf shirt and never play golf, or she may wear a bathing suit and never go near the water—but, when she puts on a wedding gown, boy, she means business.

* * * *

Doctor: "Bill, I have er, er, er, taken the liberty of sending you my bill again, it's long past due, you know."

Bill: "Yeah? Well, I have taken your advice and am not letting a thing worry me."

MISSISSIPPI STATE BOARD OF HEALTH

Cost of the people of Mississippi for public health work during 1938 as provided by legislative appropriation was $208,750. This figure includes a half year's venereal disease appropriation, which started July 1. A pneumonia view of public health work in the state during 1938 reveals the following milestones: (1) the initiation of a venereal disease program; (2) arrangements for eight new full-time health departments; (3) the beginning of nursing service for mothers in childbirth unable to have this service otherwise; (4) the passage of valuable legislation for health and safety.

Through the co-operation of local medical societies syphilis clinics for the treatment of white and black who are unable to pay are now functioning in twenty-three counties in the state. Six more counties will have this service early in 1939.

Counties in which appropriations for full-time health departments were made during 1938 are Alcorn, Lafayette, DeSoto, Tunica, and a district composed of George, Perry, Greene, and Stone. The addition of these new counties to those already operating will give the state a total of thirty-nine counties deriving the benefits of full-time health service. These counties represent 60 per cent of the population and 51 per cent of the area of Mississippi.

Physicians in Pike County with confinement cases unable to pay a nurse may have the assistance of specially trained health department nurses at time of delivery. This service is proving valuable to physician, mother, and infant. More adequate care during confinement is believed the greatest present need to reduce maternal and infant mortality. It is thought that the provision of nursing service to physicians for assistance with deliveries fills a long-felt want and that it will spread to other sections of the state.

Health and safety laws passed during 1938 included the Uniform Drivers License Law, the Uniform Rules of the Road Law, and an act requiring every dog in Mississippi over the age of six months to be vaccinated once a year against hydrophobia.

It is interesting to note that during the first five months after these laws went into effect, automobile deaths decreased more than 30 per cent over the same period in 1937. The number of dog heads sent to the State Hygienic Laboratory for rabies examination the first six months after this legislation decreased more than 60 per cent and the number of requests for rabies vaccine decreased more than 50 per cent over the same period the preceding year.

* * * *

Appointment of six county health officers, three of whom will inaugurate new full-time county health departments was announced during January by Dr. J. A. Milne, Director of County Health Work.

On January 2, Dr. J. W. Evans, Jr., became director of the new Desoto County health unit. Doctor Evans has been in Pike County for the past few months as assistant health officer.

Dr. J. H. Armstrong was named director of the Lafayette County Health Department, inaugurated during January. Doctor Armstrong is a native of Vaiden and before going to Lafayette County was assistant health officer in Lauderdale County.

Dr. T. K. Chandler, Jr., was appointed to head the new full-time health department in Tunica County. Doctor Chandler is a native of West Point and following private practice there was assistant health officer in Forrest and Coahoma Counties.

Dr. J. W. Dorman succeeded Dr. Guy M. Post as health officer in Marshall County. Doctor Dorman has been resident physician at the State Charity Hospital, Vicksburg, and assistant health officer in Lee County.

Doctor Post was named to succeed Dr. N. C. Knight in Coahom County. Doctor Knight was appointed health officer in Lauderdale County following the transfer of Dr. D. V. Galloway to State Board of Health officer in Jackson where he is supervisor of the new venereal disease control program.

* * * *

Ways and means to lessen the dangers in "eating out" were reviewed by Mississippi sanitation engineers called to Jackson, February 2, for an all-day conference by Mr. H. A. Kroeze, State Director of Sanitary Engineering.

About fifty men attended the session. The program centered around utensil sterilization in public eating places and regulations governing food-handling establishments. Techniques for biological examination to determine the effectiveness of utensil sterilization were demonstrated, and several types of commercial equipment for sterilization were displayed. Sanitation men were instructed in the proper use and operation of equipment.

Though regulations are provided for the control of eating establishments, the profit motive of the proprietor sometimes is too great for him to give much consideration to the public. Proprietors must either be "sold" on the idea that sanitation pays in increased business and good will or they must be forced to conform to sanitary rules and regulations. Attempts are always concentrated on the first approach, and force is used only as a last resort.

A report was given at the Sanitation Conference of a demonstration "school" for waiters and waitresses conducted in Tupelo by Mr. R. H. Riggin, Lee County Sanitary Engineer. This "school" met for a number of times when all the practical details of sanitation and sterilization were demonstrated and discussed. So successful were these meetings that "schools" for waiters and waitresses have been recommended by Mr. Kroeze for use all over the state.

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The value of birth and death registration in Mississippi was the subject of the first staff conference of the State Board of Health this year, held January 14 by Dr. R. N. Whitfield, Director of Vital Statistics.

Dr. Whitfield pointed out that vital statistics are the measuring rod of public health accomplishments. Only by reliable figures which show where death rates are rising and where they are decreasing can the emphasis in preventive medicine be placed, he said.

A reduction in birth and death registrars from almost 1000 in 1935 to only 123 now is a "vast improvement" in consolidation of effort and better registration.

By the end of this year, each county will have a book of births for the past twenty-six years arranged in alphabetical order, Doctor Whitfield stated. This book will be of value in each county to prove school, marriage and voting ages, for proof of age for Government employment such as Army, Navy, CCC camps, and many other purposes.

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Speakers on the program of the regular staff conference held January 28 were Miss Hannah Nickel, parasitologist with the State Hygienic Laboratory, and Dr. W. E. Noblin, director of the Hinds County Health Department.

Miss Nickel told of the December meeting of the American Association for the Advancement of Science held in Richmond, Va., at which she spoke on a technic valuable in teaching parasitology devised during Master's thesis research work. She also told of the zinc sulphate levitation method of diagnosing intestinal parasites now being adopted by leading parasitologists in the country and which Mississippi is the only state to use in its State Hygienic Laboratory.

Interesting developments in the new ambulatory pneumothorax clinic for the treatment of tuberculosis in Hinds County were revealed by Dr. Noblin. Clinics are held each Tuesday and Friday by a member of the Central Medical Society for treatment of suitable tuberculous cases unable to obtain treatment otherwise.

Dr. Noblin stated that twenty-three open, active cases of tuberculosis in Negro servants who were nursing babies and cooking have been found during recent diagnostic chest clinics in Hinds County.

The detection of disease among servants is an outstanding program of the Hinds County Health Department, and health certificates are issued by Dr. Noblin on servants only when they are in no danger of transmitting tuberculosis, syphilis, gonorrhea, typhoid fever, and dysentery.

* * *

A new test for the laboratory diagnosis of syphilis may be adopted as the official one of the State Hygienic Laboratory, according to Dr. H. C. Ricks, director. The Eagle flocculation test is regarded as more sensitive than the complement fixation test now being used, and both serologists in the State Hygienic Laboratory are spending four weeks at Johns Hopkins with Dr. Harry Eagle in the study of his technique.

Mrs. Inez Townsend returned to the State Laboratory the latter part of January and Mr. Gordon Reeves returns the latter part of February after completion of work with Dr. Eagle in Baltimore.

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Dr. Underwood's itinerary took him to a meeting of the Central Medical Society on January 3 in Jackson, where he served as toastmaster. On January 6 he spoke to the Lion's Club in Jackson on "A Health Inventory," on January 10 to a joint meeting of several Vicksburg PTA's on "Looking Forward and Backward" with special emphasis on syphilis; and on the same day to the Issaquena-Sharkey-Warren-County Medical Society, Vicksburg, on "Some Recent Developments in Medicine and Public Health." On January 26, Dr. Underwood addressed the Houston Hospital staff on "Recent Trends in Medicine and Public Health."

Called out of the state for a meeting of the Planning Committee for White House Conference on Children in a Democracy, Dr. Underwood attended this conference at the Children's Bureau in Washington, D. C., January 16.

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Visitors to the State Board of Health on January 11 were Dr. L. L. Lumsden, U. S. Public Health Service, New Orleans, and Dr. W. Palmer Dearing, U. S. Public Service, Montgomery.

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Serving as state chairman for Mississippi's Celebration of the President's Birthday, Dr. Underwood organized every county in Mississippi in the campaign against infantile paralysis. Interest was keen in fund-raising plans, half the proceeds of which will be kept in Mississippi this year. Plans for permanent county and state organizations against infantile paaralysis also lent impetus to the drive. These chapters will be ready for instant action whenever and wherever the disease appears.

Celebrations took varied and unique forms, including balls, dances, athletic contests, basket ball tournaments, band concerts, musicales, Chinese checker parties, dinner parties, playlets, spaghetti suppers, a beauty contest, and a public wedding.

It is expected that receipts from the Celebration of the President's Birthday will reach a new peak in Mississippi this year.

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Broadcasts by the Board of Health at 9:30 each Saturday morning over WJDX were as follows during January:

January 7. Dr. Felix J. Underwood, Executive Officer, State Board of Health, Jackson—"A Health Horoscope."

January 14. H. A. Kroeze, C. E., Director, Sanitary Engineering, State Board of Health, Jackson—"Eating and Drinking Utensil Sterilization."

January 21. Dr. A. L. Gray, Director, Division of Preventable Disease Control, State Board of Health, Jackson—"Murderers from Ambush."

January 28. Dr. Felix J. Underwood, Executive Officer, State Board of Health, Jackson, and Miss Gladys Eyrich, Supervisor of Mouth Health, State Board of Health, Jackson—"To Arms!"

Jackson, Felix J. Underwood,
Feb. 7, 1939. Executive Officer.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the officers directing their activities this year should be known.

MISSISSIPPI STATE MEDICAL ASSOCIATION: Seventy-Second Annual Session and Thirty-Sixth Annual Session of the House of Delegates, Gulfport, May 9, 10, 11, 1939.

Adams County Medical Society: James C. Rice, Natchez, president; Fred Geisenberger, Natchez, secretary. Meets third Tuesday, each month, Natchez, 7:30 p. m.

Amite County Medical Society: W. S. Stewart, Oskya, president; D. H. Thornhill, Crosby, secretary. Meets second Thursday, each month with Wilkinson County Medical Society, Field Memorial Hospital, Centreville.

Central Medical Society: J. T. Rainer, Yazoo City, president; Lawrence W. Long, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. D. House, Sledge, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: William P. Warfield, Clarksdale, president; N. C. Knight Clarksdale, secretary. Meets second Wednesday each month, Alcazar Hotel, Clarksdale, 12 noon.

Coast Counties Medical Society: F. O. Schmide, Ocean Springs, president; D. L. Hollis, Biloxi, secretary.

Delta Medical Society: G. Y. Gillespie, Greenwood, president; V. President, JJetaoinnnnn wood; J. G. Archer, Greenville, vice-president; F. M. Acree, Greenville, secretary and treasurer. Meets second Wednesday of April and October. Rotates through five counties, 2 p. m.

DeSoto County Medical Society: President, Dr. Henry M. Wadsworth, Hernando.

East Mississippi Medical Society: C. H. Harrison, Philadelphia, president; Bob A. Cameron, Meridian, secretary.

Franklin County Medical Society: C. A. Everett, Bude, president; L. Costley, Meadville, secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: Dr. Walter E. Johnston, Vicksburg, president; Dr. Alston Callahan, Vicksburg secretary.

Marshall County Medical Society: C. R. Senter, Byhalia, president, Herbert Phillips, Holly Springs, secretary. Meets second Thursday each month, alternating between Byhalia and Holly Springs.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary.

North Mississippi Medical Society: C. M. Speck, New Albany, president; S. E. Eason, New Albany, vice-president; A. H. Little, Oxford, secretary. Meets third Wednesdays of January, April, July and October, unless otherwise designated. Place of meeting: Varies.

Northeast Mississippi Thirteen-County Medical Society: Dr. R. J. Brown, Iuka, president; A. J. Stacy, Tupelo, secretary. Meets second Tuesday, March, June, September, December.

Pike County Medical Society: E. M. Givens, McComb, president; T. Paul Haney, Jr., McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: L. O. Carruth, Tupelo, R.F.D., president; O. F. Carr, Pontotoc, secretary. Meets first Tuesday, each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Sunflower County Medical Society: U. S. Wasson, Moorhead, president; H. B. Cottrell, Indianola, secretary.

Tallahatchie County Medical Society: G. Lacy Biles, Sumner, president; G. D. Hightower, Webb, vice president; J. E. Powell, Charleston, secretary.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: (Copiah-Lawrence-Lincoln-Walthal), R. S. Savage, Brookhaven, president; R. B. Zeller, Hazlehurst, secretary. Meetings for 1930: Wesson, March 14th, 12:15 p. m.; Tylertown, June 13th, 12:15 p. m.; Monticello, Sept. 12th, 12:15 p. m.; Brookhaven, Dec. 12th, 12:15 p. m.

Webster County Medical Society: E. F. Arnold, Bellefontaine, president H. K. Curry, Eupora, secretary.

Wilkinson County Medical Society: C. E. Catchings, Woodville, president; E. M. Butler, Centreville, secretary. Meets second Thursday, each month, with Amite County Medical Society, Centreville.

Winona District Medical Society: T. J. Brown, Grenada, president; S. B. Caruthers, Grenada, secretary.

ADAMS COUNTY MEDICAL SOCIETY

Dr. James C. Rice, Natchez, was recently elected president, and Dr. Fred Geisenberger, Natchez, secretary of the Adams County Medical Society, for the year of 1939.

At the last meeting of the society, Dr. W. H. Smith gave a most interesting paper on "Prenatal Immunization."

Several of our members attended the first meeting of "The Thirty-Niners," a Natchez booster club, to celebrate beginning of the work on the Natchez bridge, a city auditorium, a water works plant, the completion of our end of the Natchez Trace Parkway, the completion of the Monroe-Natchez electric line, and the completion of Highway 61 from Memphis to the Louisiana line.

Natchez, F. S. Dixon.
February 2, 1939.

COAHOMA COUNTY MEDICAL SOCIETY AND CLARKSDALE HOSPITAL MEDICAL STAFF

The meeting was called to order in Room 206 of the Alcazar Hotel immediately after lunch February 9. Minutes of the previous meeting were approved as read.

Dr. W. H. Brandon gave a report on the advisability of what journals to take at the Carnegie Library. He recommended three journals. They are as follows:

New England Medical Journal, $6.00
Practitioner, $10.50.
Annuals Of Internal Medicine, $7.00.

Dr. Brandon made a motion that these journals should be subscribed to immediately. Dr. Slaughter seconded the motion. Dr. Hughes discussed it. Dr. Dye stated that he would give the California and Western Medical Journal to the library.

Dr. J. L. Levy then introduced Dr. Guy Post, the new health officer for Coahoma County. Dr. Frank Helvestine, Jr., of the Lederle Laboratories, Inc., presented a film on "The Management of the Pneumonias."

There being no further business the society adjourned.

Clarksdale, Julius L. Levy,
February 9, 1939. Secretary-Treasurer.

COAST COUNTIES MEDICAL SOCIETY

The February meeting of the Coast Counties Medical Society was a testimonial dinner given to Dr. Dan Williams for the long and faithful service that he has rendered to organized medicine and for his efforts in keeping medicine up to the high plain that it now enjoys.

This dinner was attended by many of the most prominent medical men in the state and several had driven long distances to pay their tribute to Dr. Dan William's work in medicine.

Among those present were Drs. Crawford, Little, Dye, Garrison, Bryan, Wall, Green, Boswell, Darrington, Frizell, and Johnston. There were twelve past presidents of the State Medical Association present at the dinner. In addition to the invited guests, practically the entire medical profession of the Coast was present; also many of the guests' and members' wives. Dr. Williams received many telegrams and letters from individuals and organizations congratulating him upon being paid this respect.

Following this dinner, Dr. Neal Owens of New Orleans read a paper on "The Care of Facial Injuries." He presented numerous case slides showing various facial injuries, malignancies, and other conditions in which facial repair is indicated. This was a most interesting paper and was thoroughly enjoyed by all those present.

Biloxi, D. L. Hollis,
February 8, 1939. Secretary.

ISSAQUENA-SHARKEY-WARREN COUNTY MEDICAL SOCIETY CLINIC

During the month of January, there were 1442 patient visits to the clinic conducted by the Issaquena-Sharkey-Warren-County Medical Society at the Mississippi State Charity Hospital, Vicksburg, or a daily average of 46. Of these, 255 were white male; 275 white female; 402 colored male, and 150 colored female. By services, there were 120 medical; 125 surgical; 35 obstetrical; 115 gynecological; 125 eye, ear, nose and throat; 22 orthopedic; 25 pediatric; 685 genito-urinary (610 venereal); admitted to hospital 190.

Patients came from 17 counties of Mississippi and four other states.

TRI-COUNTY MEDICAL SOCIETY

DR. ROBERT EMMETT SYLVERSTEIN

Dr. Robert Emmett Sylverstein died January 2, 1939. He was 71 years of age, a graduate of Tulane University of Louisiana and a valued and beloved member of the Tri-County Medical Society, in which he had held numerous offices. Several years ago, because of failing health, he resigned as mayor of Tylertown, a position he had held for some time. Dr. Sylverstein was an ornament to the profession and a true gentleman in every sense of the word.

Dr. and Mrs. James G. Blaine, Hazlehurst, are welcoming Sue Helen, born January 18 at the Baptist Hospital in Jackson.

Hazlehurst, R. B. Zeller,
January 20, 1939. County Editor.

STAFF OF REVIEW

Eye Ear, Nose and Throat—Alston Callahan, Vicksburg.
Internal Medicine—Laurance J. Clark, Vicksburg.
Obstetrics and Gynecology — J. W. Lucas, Greenwood.
Orthopedics —Thomas H. Blake, Jackson.
Pathology and Clinical Pathology — E. T. White.
Pediatrics—Harvey F. Garrison, Jackson.
Public Health—Felix J. Underwood, Jackson.
Radiology and Roentgenology—Karl O. Stingily, Meridian.
Surgery—A. Street, Vicksburg.
Tuberculosis—Henry Boswell, Sanatorium.
Urology—Temple Ainsworth, Jackson.

The purpose of this section of our journal is to provide abstracts, and comments and interpretation of articles appearing in current medical literature. It is realized that all journals are not available to all members of the Association and that they could not be read if they were available. Through a staff of review important articles are brought to the attention of our readers together with opinions of the reviewers. You may not agree with the ideas of the authors whose articles are reviewed or with the interpretations of the reviewers. If not, why not give your own ideas? Through discussion comes the truth. Also you are invited to send in abstracts and comments of your own for the benefit of all. May we not hear from YOU?

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Harvey F. Garrison, Jackson

THE INFLUENCE OF TONSILLECTOMY UPON THE COURSE OF RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE—A STUDY OF 108 CASES, Warde B. Allen and John W. Taylor, Bulletin of the Johns Hopkins Hospital, 63:111 (Aug.) 1938.—1. One hundred and eight patients subjected to tonsillectomy and adenoidectomy because of rheumatic fever, between 1910 to 1924, were reinvestigated in 1935. 2. Following operation recrudescences of acute rheumatic manifestations occurred in 43.5% of the patients. 3. Recrudescences were common in the first five years after operation. Most of the patients who had repeated recrudescences during this period died of rheumatic heart disease. 4. Patients living for more than five years after operation had almost as many recrudescences after the five-year period as during it. 5. Evidence of continued nasopharyngeal infection was prominent in the patients having recrudescences. 6. Chorea alone was less often followed by severe rheumatic heart disease than was polyarthritis alone. 7. Rheumatic heart disease occurred more frequently in those having recrudescences, and deaths from rheumatic heart disease occurred only in this group of patients. 8. The total incidence of rheumatic heart disease was relatively but perhaps not significantly low. 9. Since rheumatic heart disease developed in only 6 of the 49 rheumatic patients not having cardiac involvement at the time of the operation, it is concluded that tonsillectomy and adenoidectomy are to be recommended in the treatment of rheumatic fever.

MENINGOCOCCUS MENINGITIS, T. Cook Smith, William T. Maxson and D. F. H. Murphey, Southern Medical Journal, 31:1168 (November) 1938.—1. The mortality rate for the group was 35.6 per cent. 2. Review of the old and recent mortalities in meningitis suggest that treatment in general has not been efficacious or that the serum has been lacking in potency. 3. Experience with this group of cases suggests that there is no advantage in introducing serum into the subarachnoid spaces. 4. Large doses of intravenous antitoxin seem to be as beneficial as inthathecal therapy, and in addition this form of therapy is more comfortable for the patient. 5. Sulfanilamide seems a valuable adjunct in the treatment of this disease. 6. Prognosis for patients with an absence of encephalitic symptoms and a low spinal fluid cell count is extremely good.—Authors' Summary.

NUTRITIONAL PROBLEMS OF THE PRE-SCHOOL CHILD, Robert A. Lyon, Ohio State Medical Journal, 34:1124 (October) 1938.—1. Marked degrees of malnutrition occurred in 5 per cent of the 12,262 children of all ages admitted to the Cincinnati Childrens' Hospital over a period of 11 years. 2. In clinics the incidence of marked malnutrition of 12,668 children, 94 per cent of whom were under six years of age, varied from 1.6 per cent to 2.5 per cent. 3. Minor degrees of under-nutrition occurred in 19 per cent of a selected nursery school group. 4. Important pre-disposing factors of marked degrees of malnutrition in children of pre-school age are acute or chronic infections, congenital defects, and endocrine disturbances. 5. Minor degrees of under-nutrition often have as their basis, poor habits of eating and inadequate amounts of rest. 6. The practical methods of detection of malnutrition are limited to the employment of height and weight tables and the estimate of a trained physician who has carefully examined the patient. Anthropometric determinations, observation of growth and maturity, and certain chemical and physiologic tests may prove to be valuable adjuncts in the more accurate detection of malnutrition. 7. Treatment of malnutrition includes the elimination of organic disease, the planning of an adequate diet, and the institution of regular habits of eating and sleeping—Author's Summary.

February 6, 1939.

SURGERY

A. Street, Vicksburg

Injection Versus Surgery In The Cure of Hernia, F. W. Slobe, The American Journal of Surgery, 42:704, (December) 1938.—Surgery has the advantage of laying the field bare, so that abnormal changes may be observed and corrective operative procedure varied according to types of changes observed.

The injection method endeavors to obtain: 1. An agglutination of the wall of the sac by adhesive inflammation and subsequent fibrosis. 2. A firbrous constriction of the tissues around the neck of the sac, so that abdominal contents cannot enter. Sclerosing solution is injected without intentionally injecting any of it directly into the sac. Irreducible hernias have been produced by the reaction to injections, resulting in intrasacular adhesions firmly fixing the herneal content and preventing cure by the injection method . This misfortune is usually due to inefficient truss management, resulting in failure of the truss to keep abdominal contents out of the sac. Satisfactory truss management is difficult and uncertain in obese individuals. The reinforcing of the abdominal wall is attempted by producing aseptic inflammation with fibrous tissue formation throughout the inguinal canal, constricting both the internal and external rings; in direct hernias, it is especially important to build up tissue in Hesselbach's triangle and to obliterate the inguinal canal, by causing agglutination of all the structures bounding it.

Patients given a series of injections deemed sufficient for their particular type of hernia, and who leave off the truss in six months after completion of the injections, will usually show a definite clinical recurrence within the next year. This may be controlled by further injections and use of truss. The recurrent hernia following injection is usually of less extent than the initial hernia. A conservative view is that the treatment should be prolonged perhaps eighteen months or longer, and that the truss may have to be worn indefinitely if the patient is to engage in active labor. Small indirect hernias in young muscular individuals may obtain a permanent cure in much less time.

The injection method is a blind procedure which does not permit observation of the exact nature of pathologic changes present, and preoperative diagnosis is far from accurate.

Mortality from surgery may be said to average a little less than 1%. It would be higher if surgery were routinely done in the aged and infirm. While some deaths have been reported following use of the injection method, these deaths were thought to be due to faulty technique and incompetency of the operators. In competent hands, withthe use of modern solutions, mortality from the injection method should be practically nil.

Complications of surgical treatment of hernia are those of any major surgical operation, shock, infection, thrombosis, respiratory lesions, hemorrhage, hematoma, etc. Fortunately, they are not common. Complications of the injection method are also not frequent. The following are some that have been reported: Pain, swelling of the cord, puncture of the peritoneum, hydrocele of the cord, drug sensitiveness, intravenous injection of the drug, hematoma, syncope and, in addition, such serious complications as cellulitis, sepsis, abscess formation, peritonitis, local gangrene, perirectal abscess, thrombosis of the deep epigastric artery, puncture of the iliac and femoral vessels, fecal fistula, production of strangulated hernia.

It may be said in favor of the injection method that a larger number of physicians could qualify themselves to perform it, than to perform the surgical operation, also, there should be less hospitalization of the patient, which would be to his advantage from an economic standpoint.

Certain conditions, such as strangulated, incarcerated, and irreducible hernias, and hernias complicated by undescended testes, are contraindications of the injection method. Also, any hernia which cannot be kept completely and painlessly reduced by a truss, is not suitable for treatment by injection. Hernias, in which the external ring is over three centimeters in width, are not suitable for the method. The method has advantages in treating hernia among the aged and infirm who are poor operative risks; patients who have persistent fear and opposition to operation; patients who, following operation, have a tendency to recurrence; patients with small postoperative recurrences where reduction can be affected; those with small direct hernias, on account of the relatively high operative recurrence rate, when dealing with direct hernias. There is also a group of patients, in which neither the surgical nor injection method can offer good prospects of cure, but in which, because of the lessened danger of the injection method, this procedure may be preferable. Such patients include those with incurable prostatic obstruction, incurable stricture, chronic bronchitis, obstinate constipation, tuberculosis, and certain other systemic afflictions, including the aged and the infirm. Such patients may be kept in bed for a week or ten days with a truss in position, a few injections being given during this period, and a series of subsequent injections given after allowing the patient out of bed. Even if this treatment does not entirely cure the hernia, it may often transform an uncomfortable existence into a comfortable one.

Recurrences may be expected after surgical treatment of indirect hernias in three to ten per cent of cases. With direct hernias, about fifteen per cent recurrence may be expected. Recurrence is more frequent when dealing with elderly patients. Apparently, the use of fascial suture in hernia operations has not reduced the incidence of recurrence. Coley reviewed a series of 1200 fascia lata operations and makes the statement that he prefers the use of silk. Reports on the incidence of recurrence following use of the injection method, vary widely. Some claim as high as 94% cured, while Burdick and Coley report recurrence in 83%. To aid in determining this point, the author studied a group of twenty-five patients given one series of injections (the number of injections deemed sufficient for each individual case), in which the truss was worn for six months and then removed, no further injections being given. Within eighteen months, a recurrence developed in almost half of the patients. The answer seems to be that except in the most favorable cases recurrence will occur unless the patient is subjected to repeated series of injections and required to wear the truss almost indefinitely.

Conclusions: The opinion is offered that surgery in general remains the method of choice; the injection treatment, however, offers a valuable addition to our armamentarium, to replace surgery in certain instances and to supplement it in others.

Comment: The reviewer has been of the opinion that the cure of hernia is best accomplished by open surgical operation, if the patient is operable and a suitable surgical risk. He has observed the disappearance of inguinal hernia following prolonged wearing of a truss. It seems quite evident that if a patient prefers wearing a truss to submitting to operation, the addition of injection treatment to the truss treatment would improve the results.

On the other hand, if the injection treatment covers a period of months and involves the wearing of the truss indefinitely if recurrence is to be avoided, surgical treatment would seem to be the method of choice unless there is definite contraindication to operation. February 10, 1939.

EYE, EAR, NOSE AND THROAT

Alston Callahan, Vicksburg

Thrombosis of Central Vein of Retina Treated With Heparin, N. Holmin and K. G. Ploman, Lancet, 1:664-665 (March 19) 1938. —These investigators saw a 52-year-old nurse who noted sudden dimness of the vision in the right eye. On examination, a diagnosis of thrombosis in the main trunk of the right central vein was established and a doubtful prognosis given. A 5% solution of heparin was injected intravenously 41 hours after appearance of symptoms which was repeated four hours later. This was continued at 4-hour intervals except during the night. Although the first changes were increasingly severe, by four months the vision was normal.

A thrombus probably had formed in the main trunk of the right central vein, possibly increasing the accumulation of fibrin or thrombocytes until obstruction became so marked that venous stasis, ischemia and hemorrhages appeared, followed by decrease in vision. Heparin counteracted growth of the thrombus, obstruction decreased and more blood flowed past it to re-establish circulation in the retina.

Thrombosis of Central Vein of Retina Successfully Treated With Heparin, C. G. Bostrom and L. William Olsson, Lancet 2:78-79 (July 9) 1938.—These investigators reported using heparin in a clerk, 59 years of age, who developed a thrombosis of the central vein in the right eye. The thrombosis was not complete originally, but at the time they saw the patient there were widespread hemorrhages extending far into the periphery. Heparin was given intravenously in 5% solution approximately one month after the onset; and fairly good vision was restored.

In intravascular thrombosis the thrombus acts as a foreign body, producing kinase and a tendency to coagulation in its neighborhood. Heparin treatment is based on the fact that heparinized blood coagulates less easily. If the thrombus does not continue to grow, the coagulum first retracts, which may cause parietal canalization, and later the thrombus itself is slowly dissolved by the action of proteolytic enzymes. The changes in this case agree well with such reasoning.

* * *

Our personal experience with heparin has been confined to one case, also. Some difficulty was encountered in locating an agent who handled this drug and several days were lost in instituting treatment. Glogau & Company, 528 S. Clark Street, Chicago, Ill., sell this product for $10.00 a gram and two grams of 5% solution were used in the treatment of this 52-year-old school executive. Although three months have elapsed since it was used, the improvement to date has been very little and a very doubtful prognosis is held.

It is quite likely that had it been possible to use the heparin sooner, a more successful result would have been obtained.

February 10, 1939.

ADAMS COUNTY

The doctors of Adams County and this section were fortunate to have brought to them the course on syphilology sponsored by the Tulane Extension Department, the Mississippi State Medical Association, and the Mississippi State Board of Health. We heartily recommend this course to anyone who has not had the opportunity to hear Drs. DeLaureal and Van Studdiford on the subject.

During the month Drs. J. W. D. Dicks, L. S. Gaudet and W. H. Smith were absent from their offices with the flu.

Natchez, F. S. Dixon,
February 2, 1939. County Editor.

DESOTO COUNTY

Gynecology may be said to be one of the most ancient branches of medicine. The papyrus of Ebers, which is one of the oldest known works on medicine and dates from 1550 B.C., contains references to diseases of women, and it is recorded that specialism in this branch was known among ancient medical practitioners. The first operation of ovariotomy is fully credited to Dr. Ephraim McDowell of Kentucky in 1809.

Dr. Crawford W. Long was the pioneer in the use of anaesthetics in surgical operations. Georgia was his birth place and he died there, Athens, June 16, 1878. Dr. W. T. G. Morton of Massachusetts used this ethereal anaesthetia later, though some incorrectly give the honor of this discovery to him.

Our doctors are civic minded and always favor what is best for the community. The thriving little city of Olive Branch has wisely elected Dr. D. C. Funderburke to the mayoralty.

In the recent elections of bank officers and directors, doctors' names are frequently seen: in Hernando, Dr. C. W. Emerson; in Olive Branch, Dr. H. A. Stuart; in Byhalia, Dr. D. R. Moore; and so all over the state.

At the Graduate Auditorium, University, Mississippi, Jan. 18, the North Mississippi Medical Society held a quarterly meeting. This special program was presented by members of the faculty of the University of Tennessee Medical School. A like interesting program was scheduled for the night session. Dr. C. M. Speck, New Albany, is the president and Dr. A. H. Little, Oxford, continues to set a high standard as secretary.

Our local medical unit will meet April 3, subject, "Oddities in the News Medically." When Dr. A. L. Emerson, Hernando, was located at Eudora, he was called to a case of labor which was unexpected by all concerned. His only help was an old decrepit woman. When delivery was completed the only cloth on the place was some coarse sacking; the scissors and the case knife were too dull to cut it with, so he and his unable aide cut out suitable things with the ax on the wood block to clothe the infant. So again "necessity was the mother of invention."

We think here of what the old negro nurse said that she noticed the first baby (and fully grown too) was the only one that came at seven months.

At our April meeting we shall attempt to describe an unusual afterbirth delivery. Results were good in this case but we hesitate to make it axiomatic.

Did you see or hear of the belled buzzard?: In Mt. Vernon, Wash., Mary had her little lamb, but Leona Thomas, an Avon girl, has a pet crow that follows her to school every day. The crow usually perches on window sills or a fire escape of the school and waits until Leona gets ready to go home.

Of course you have read *Self Help*, the author, Samuel Smiles, (1812-1904) famous Scottish writer, was a physician.

Relations of accidents as a principle cause of death to other causes, by ages: 45-64: heart disease, cancer, cerebral hemorrhage, nephritis, pneumonia, tuberculosis and accidents; 65 and over: heart disease, cerebral hemorrhage, nephritis, cancer, pneumonia, influenza, and accidents. The total rate from accidents was 70.7 per 100,000 population. The male death rate of 102.3 was more than two and one-half times the female rate of 39.3; that is, the ratio of male deaths from accidents to female deaths from accidents was approximately 5 to 2.

Census Bureau statistics give physicians a higher mortality rate than average citizens: 10.69 per 100,000 dying each year, as against 8.70 of those whose health they labor to maintain.

Dr. Charles Morgan Hammond, Walls, has completed and has one of his respirators at the John Gaston Hospital, Memphis; it attracted much deserved attention at the Tri-State Fair. He also just completed a respirator for infants, small enough to carry in your car. This will be exhibited at the Mid-South Medical Assembly. The Hammond respirator is a marvelous apparatus and no doubt will be in great demand when it is better known and appreciated.

"Whether he be on one side or the other in this controversy between the American Medical Association and the Group Health Associations, we think that medicine, of all occupations, is least motivated by the acquisitive impulse. We've all needed doc. We all have been willing to give our shirt and the fillings from our teeth if he would only come right now; and then we all have kicked about his bill if it was more than $2, after we got well.

"The very nature of his work—the strange ambition which makes one human being want to spend seven or eight years learning the anatomy of other human beings in order to keep the microbes on straight—has always been a mystery to us. From the old country doctor to the most modern and steam-heated specialists, it's a service that can't, by its very nature, be essentially mercenary. Commercially, you could go farther and acquire more, applying the same amount of energy and intelligence, in the shoe business, where the telephone doesn't ring in the middle of the night.

"But maybe this inherently noble vocation has, as the Steffens story puts it, become over-organized.

"Anyhow, that's the question in this anti-trust case."—The Press-Scimitar.

Rt. 4, Memphis, Tenn. L. L. Minor,
Feb. 10, 1939. County Editor.

LEFLORE COUNTY

Dr. T. M. Dye, Clarksdale, who is mayor of Clarksdale, visited Greenwood. Jan. 2, to see Gen. S. R. Keesler sworn in as our mayor.

Drs. W. E. Denman and R. B. Yates visited in Charleston Jan. 4.

Dr. Geo. Baskervill returned from the Rose Bowl game in California, Jan. 6 in good shape and reported a most wonderful time.

Dr. R. E. Wilson addressed the regular staff meeting of the new hospital in Tupelo Jan. 9.

Dr. and Mrs. R. B. Yates, and daughter, Miss Marjorie, and Gene Denman left for a two weeks' visit in Florida, Jan. 12 to 27.

Mrs. B. B. Harper, wife of Dr. B. B. Harper, Itta Bena, was a patient in the Greenwood Leflore Hospital, Jan. 12 to 15.

Dr. O. P. Myers, Indianola, was a visitor to Greenwood, Jan. 15.

Mrs. E. G. Hamilton, wife of the late Dr. E. G. Hamilton, was admitted to the Greenwood Leflore Hospital, for a major operation Jan. 16.

Dr. and Mrs. J. C. Adams were called to Brownsville, Texas, Jan. 19, on account of the sudden death of the doctor's brother-in-law, Mr. R. J. Binghom, Superintendent of Schools.

Dr. and Mrs. H. L. Howard, Winona, were visitors to Greenwood Jan. 23.

Drs. Geo. Baskervill and W. E. Denman attended the funeral of Mr. Richard Townes at Minter City on Jan. 27.

Greenwood, W. B. Dickins,
Feb. 1, 1939. County Editor.

HOSPITAL STAFF TRANSACTIONS

CALENDAR OF HOSPITAL STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASSOCIATION, Tenth Annual Session, Gulfport, May 8, 1939.

Aberdeen Hospital: Third Monday, each month, 7:00 p. m.

Anderson Infirmary: First Friday, each month, 6:30 p. m.

Biloxi Hospital: First Thursday, each month, 7:30 p. m.

Bramlett Hospital: Third Wednesday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 12:00 noon.

Field Memorial Hospital: Second Thursday, each month, 6:30 p. m.

Gilmore Sanitarium: Third Thursday, each month, 8:00 p. m.

Greenwood-Leflore Hospital: First Thursday, each month 6:30 p. m.

Grenada Hospital: Second Tuesday, each month, 6:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month. 7:30 p. m.

Holmes County Community Hospital: Second Thursday, each month, 7:00 p. m.

Houston Hospital: Last Thursday, each month, 7:30 p. m.

Ivy Hospital: First Monday, each month, at 7:00 p. m.

Jackson County Hospital: Second Thursday, each month, except July and August, 7:00 p.m.

Jackson Infirmary: Last Tuesday, each month, except three summer months, 7:00 p.m.

King's Daughters Hospital, Brookhaven: First Tuesday, each month, 7:00 p. m.

King's Daughters Hospital, Greenville: First Wednesday, each month, 7:00 p. m.

King's Daughters Hospital, Gulfport: Third Thursday, each month, 8:00 p. m.

King's Daughters Hospital, Yazoo City: First Monday, each month, 7:30 p. m.

Macon Hospital: First Tuesday, each month, 7:30 p. m.

Magee General Hospital: Twenty-fifth each month, 7:30 p. m.

Mayes Hospital: First Monday, each month, 2:30 p. m.

McComb City Hospital: First Tuesday, each month, 6:00 p. m.

McComb Infirmary: Second Thursday, each month, 7:00 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Mississippi State Hospital, Vicksburg: Third Tuesday, each month, 7:00 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

New Albany Hospital and Clinic: Second Tuesday, each month, 8:00 p. m.

Newton Hospital: Second Thursday, each month.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Oktibbeha Hospital: Last Thursday, each month, 7:30 p. m.

Oxford Hospital: Last Monday, each month.

Pontotoc Clinic: First Tuesday, each month, 7:30 p. m.

Rush's Infirmary: First Friday, each month, 7:30 p. m.

Scott County Hospital: Third Wednesday, each month.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

Tylertown Hospital: Second Thursday, each month, 7:00 p. m.

U. S. Veteran's Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:30 p. m.

GREENWOOD LEFLORE HOSPITAL STAFF MEETING

The staff meeting of the Greenwood Leflore Hospital, Greenwood, was held as usual, Thursday night, January 5. Thirteen were present. After a nice supper served by the nurses, Dr. J. P. Bates opened the meeting and the regular business was attended to—reports of the work done in the hospital, births, deaths, operations, etc.

The deaths reported and discussed by all present included a death from an automobile wreck with fractures of both legs and internal injuries in a man; and the death of Dr. T. C. Kelly, Sidon, with cerebral hemorrhage, chronic nephritis and terminal hypostatic pneumonia (reported by Dr. R. B. Yates).

A called meeting of the staff was held January 26, to see the illustrated films of hemorrhagic conditions presented through the courtesy of the Mead Johnson Company.

Greenwood, W. B. Dickins.
February 1, 1939.

HOUSTON HOSPITAL

Thursday night, January 26, at the regular Houston Hospital staff meeting, forty doctors and a group of non-professional guests heard addresses by three of the state's most prominent medical authorities.

Dr. Lawrence W. Long, Jackson, president of the Mid-South Postgraduate Medical Assembly, presented a most interesting slide—illustrated lecture on "The Present Day Treatment of Gas Gangrene."

Dr. J. P. Wall, Jackson, president-elect of Mississippi State Medical Association, discussed "Medical Social Insurance," and expressed his opinion that such a system is capable of accomplishing a great deal of good, but conditioned it upon the provision medical insurance be free of political control.

Dr. Felix J. Underwood, executive director of the State Board of Health, denounced medical quackery being practiced in Mississippi, cited the need for medical education of the people, and made prediction as to the future of governmental medical programs.

Dr. Underwood expressed the opinion that President Roosevelt will not seek to push through a program of strictly socialized medicine, but will ask Congress to supply money for the purpose of extending medical benefits to the indigent through the co-operation of the medical profession, without setting up a competing government organization or regimenting the profession.

Among the doctors attending the meeting were: Drs. J. M. Hood, G. G. Armstrong, J. H. Stennis, O. B. Crocker, W. C Walker, J. A. Hardin, C. D. Davis, Z. A. Dorsey, E. F. Arnold, S. K. Gore, R. B. Caldwell, H. A. Stokes, Harvey Williams, W. H. Curry, C. B. McCown, J. R. Hill, W. H. Lacey, John D. Dyer, F. L. McGahey, J. Rice Williams, H. K. Curry, W. H. Cleveland, C. H. Love, J. J. James, R. A. Creekmore, J. S. McNeal, D. H. Fondren, B. J. Shaw, G. S. Bryan, R. P. Donaldson, T. D. Houston, S. H. Davis, W. J. Aycock, E. B. Young, E. K. Guinn, J. S. Edmondson, T. H. Anderson and V. B. Philpot.
Feb. 10, 1938.

RESOLUTIONS OF RESPECT AND REGRET, RELATIVE TO THE DEATH OF DR. CHARLES LeBARON, ADOPTED BY THE MEDICAL STAFF OF THE KING'S DAUGHTERS' HOSPITAL, GULFPORT, IN CONVENTION ON JAN. 17, 1939.—

On motion made and seconded, the following resolution was adopted unanimously by the Medical Staff of King's Daughters' Hospital, of Gulfport, Mississippi.

WHEREAS, it has pleased an all-wise Providence to remove from the world Dr. Charles LeBaron, of Gulfport, who departed this life on the eleventh day of December, 1938; and,

WHEREAS, Dr. LeBaron, originally from Mobile, Alabama, and a graduate of Alabama Medical College, had practiced the professions of medicine and surgery at Gulfport, and in its vicinity, for thirty-nine years continuously prior to his death; and was intimately known to, and is mourned by not only us, his co-workers, and members of his own profession, but by many thousands of laymen of all stations, men, women, and children, who were beneficiaries of his professional skill, and of his humane sympathy and generosity, gratefully and affectionately remembering him; and

WHEREAS Dr. LeBaron was devoted at all times throughout his long life intensely to the principles of his beloved profession, and ours; because of scientific proclivity as a student and scholar, and to advance the cause of humanity, keeping constantly abreast of the march of research, experimentation, experience and observation upon which scientific learning is founded, creating in him an asset, ornament, and pride of our community, his life being an inspiration, and an uplifting example to all others; and

WHEREAS, there was no more public spirited and progressive citizen of our region than Dr. LeBaron: he having been at the time of his death a member of the American Medical Association, Southern Medical Association, State Medical Association, Coast Clinical Association, twice president of the Coast Counties Medical Association, past president of the Coast Clinical Association, and several times chief of staff of King's Daughters' Hospital,

NOW THEREFORE, be it resolved by the Medical Staff of King's Daughters' Hospital, of Gulfport, Mississippi, that we bow in reverence to the memory of Dr. Charles LeBaron as a man; that we acknowledge with deep respect his attainments and services as a scientist: and that, in common with all who knew him, we express insofar as words may convey our sentiment, the depths of our sorrow over the loss that we and the community have suffered in his passing from the world.

Be it further resolved, that this resolution be spread upon the minutes of this meeting of the staff; that a copy thereof be delivered to the press for publication; and that a copy, certified by the secretary of the staff, be transmitted to the bereaved family of Dr. LeBaron, with renewed expressions of our condolences.

Gulfport, Archibald C. Hewes,
Jan. 26, 1938. Secretary of the Staff.

THE KING'S DAUGHTERS' HOSPITAL

Yazoo City

The regular monthly meeting of the staff of the King's Daughters' Hospital was held in the meeting room of the hospital, at 7:30 p. m., the first Monday in the month.

The routine business of the hospital was discussed and the scientific program postponed until the next meeting. There was a long and thorough discussion of the Syphilis Clinic as conducted by the County Health Department and it was the unaminous opinion of the staff that they did not care to participate in it as now conducted, but preferred to treat the charity syphilitic cases in their own offices with the state furnishing the drugs. A committee was appointed to notify the health department of the staff's opinion.

The body approved of the plan for giving medical service to the families furnished by the Farm Security Administration subject to some details as to standard fees, etc. The details were to be worked out by a committee appointed by the chairman. After refreshments were served, the staff adjourned.

Yazoo City, Roberta Prewett,
Feb. 8, 1939. Superintendent.

VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Friday, February 10, and after a supper served at [illegible]:30 p. m., was called to order by Dr. G. C. Jarratt with thirteen members and three guests present.

Reports from the Records Department and Analysis of the Hospital:

Report of Vital Statistics.—Dr. F. Michael Smith, Director, Warren County Health Department.

Cancer Clinic—For Discussion:

(1) Squamous cell carcinoma of hand (grade IV).—Dr. A. Street.

(2) Squamous cell carcinoma of esophagus (grade IV).—Dr. A. Street.

(3) Adeno-carcinoma of left breast (grade IV).—Dr. L. J. Clark.

Special Case Reports:

(1) Carcinoma of Fundus of Uterus.—Dr. A. Street.

(2) Bleeding Duodenal Ulcer.—Dr. J. A. K. Birchett, Jr.

Discussed by Dr. A. Street, S. W. Johnston and L. S. Lippincott.

(3) Typhoid Fever.—Dr. R. A. Street, Jr.

Demonstration of Selected Roentgen Ray Studies.—Enlarged thymus; Pulmonary tuberculosis (2 cases); Carcinoma of esophagus; Carcinoma of sigmoid; Right ureteral calculus.

(1) Dr. G. M. Street.—Study of Endometrium with Regard to Ovulation and Non-ovulation During Menstruation.

(2) Dr. S. W. Johnston.—Alcohol, a Cause of Hepatic Cirrhosis; Fallacy of Giving Sulphanilamide in Vaginitis.

The next staff meeting will be held Friday, March 10, 1939.

ABSTRACT: BLEEDING DUODENAL ULCER

J. A. K. Birchett, Jr., M.D.

Patient :White, female, age 27.

Present Complaint: Recurrent intestinal hemorrhage.

History of Present Complaint: Patient has been under observation in this clinic for a period of two years, because of recurrent massive intestinal hemorrhage. The first attack occurred in June, 1937, and consisted of a prodromal state of two or three weeks of extreme malaise and weakness, associated with fever and general prostration. She was admitted to the hospital for observation and diagnosis of her condition, and the day following hospitalization, there was sudden syncope with passage of large bloody stools. During this time, the patient's Widal was found to be positive and a diagnosis of typhoid fever with intestinal hemorrhage was made. Following several transfusions and typhoid regime of therapy, patient recovered from this condition and went back to her normal duties.

Approximately four months after this illness, she was again affected with sudden massive gastro-intestinal hemorrhage and was again admitted to the clinic, where she was given transfusions and symptomatic treatment for possible bleeding peptic ulcer, as prior to this attack she had begun to complain of symptoms which were suggestive of duodenal lesion. The patient was convalescent from this severe hemorrhage without any ill effect and, as soon as she had gained her normal balance, gastro-intestinal study was done, which showed findings in the fluoroscopy examination commensurate with a duodenal ulcer. Several months after this attack, there was evidence of hemorrhage, which was as severe as the previous ones; however, there was a severe acute hemorrhage which developed in September of 1938, which was more severe and from which it took the patient longer to rally than any of the previous attacks. The gastro-intestinal symptoms, such as gaseous distention, upper abdominal pain, and pain associated with certain types of foods, and because of irregularity of eating, suggested that the ulcer was increasing and was not having any tendency to heal, though the patient was given dietary restrictions and alkalies.

Past History: In 1932, patient had pelvic surgery done, at which time an unusual type of ovarian tumor, bilateral, was removed. The appendix was also taken. The general health has been good following this operation up until the development of the first acute intestinal hemorrhage in 1937. The physical examination showed a well developed and nourished white female who had lost some weight, but was apparently in fair general health. The physical findings were not remarkable, except for some tenderness over the upper right quadrant of the abdomen.

The laboratory examination showed the urine essentially negative, sedimentation time was normal, blood count showed a slight anemia with some increase in the total leukocyte count. Serology for Wassermann, Kahn and Kline and Young was negative.

Procedure: In view of the fact that we were dealing with a case of duodenal ulcer, which had had four previous attacks of massive hemorrhage, we felt it advisable to do an exploratory procedure, in order that we might see which would be the best method of relieving the patient of this lesion. Therefore, on November 13, under cyclopropane anaesthesia, an upper right rectus incision was done and an ulcer was found on the anterior surface of the duodenum just below the pyloric ring and extending completely across the anterior circumference of the duodenum. Because of the accessibility of the ulcer, the ulcer was excised and a Judd pyloroplasty was done. No attempt was made to do a posterior gastro-enterostomy for two reasons, there being considerable adhesions of the mesocolon because of the previous operation, and the patient was known to have high acid and, for that reason, it was fearful that possible stroma ulcer might develop if this procedure was done. Patient had a fairly placid convalescence. She was given 500 cc. of citrated blood on the third postoperative day and the stomach was kept completely decompressed for one week by the use of the Jutte tube. After that time, she was able to take and retain nourishment and was able to be discharged from the clinic on the 18th postoperative day.

Case No. 2:

Patient—White male, age 41, druggist by occupation.

Present Complaint—Marked weakness, associated with the passage of copious tarry stools.

History of Present Complaint—Began five days ago to have weakness and tired feeling while he was at work. There was considerable aching in the legs and back and some slight nausea. He considered that he was taking "flu" and thought it advisable to take a good laxative. Therefore, he took a rather generous dose of some alkali, which resulted in several fluid stools. The next morning he felt a little improved, but went to work and continued to work until the middle of the day. At that time, he returned home and went to bed, and took several toddies to boost himself up. He felt bad all that night, and the next day about noon called for medical advice. When he was seen at home, there was history of having gone to the bathroom that morning and having had a copious semi-solid tarry stool. Following the elimination, there was faintness, and he had to be assisted back to the bed. When he was seen at this time, he was in a state of marked anemia and shock and was immediately brought to the clinic for treatment.

Family History — Several members of the family have arteriosclerosis. His father died with cerebral hemorrhage at the age of 56, his mother died at the age of 50 with carcinoma of the stomach. One brother living has arteriosclerosis.

Had the usual childhood diseases. Had sinus operation and tonsils removed in 1926, has had digestive upsets, such as gaseous distension, belching and ravenous appetite, says he is always hungry. Consulted physician two years ago for this complaint, and he was told that he had marked increase in blood pressure and that he should diet because of this disturbance.

Physical Examination —Fairly well-developed and nourished white male, but with evidence of marked pallor, suggestive of acute blood loss. Temperature 98, pulse rate 120, blood pressure, systolic 170, diastolic 90. The general examination is essentially negative except for some pain over the upper right quadrant of the abdomen with slight rigidity and rapid heart action because of the loss of blood. Examination shows no evidence of hemorrhoids.

Clinical Laboratory— Blood count, hemoglobin 62%, red cells, 2,900,000; leukocytes 16,200, small lymphoctytes 39%, large lymphocytes 2%, neutrophilis, mature, 52; band forms, 6; eosinophils 1%. Urine essentially negative.

Procedure—We were dealing with a patient which showed evidence of acute gastro-intestinal hemorrhage because of the passage of the copious tarry stools, and the lesion was attributed to a possible ulcer of the duodenum because of the digestive history. Immediately after admission, donors were sought and the patient was given several transfusions at intervals. The first transfusion was given on January 7, 300 cc. of blood and the next day it was found that the hemoglobin had dropped to 47%, with only 2,000,000 erythrocytes. Therefore, the second transfusion of 400 cc. was given. On January 10, two days after this transfusion, following which the patient showed marked improvement, the hemoglobin was 62% and the erythrocytes 2,650,000. On January 10, the patient was again given 400 cc. of blood because of the fact that suddenly he began to give evidence of further bleeding. Following this transfusion there was a marked reaction with temperature of 104°F, but, following this, patient improved steadily and, on January 19, which was 12 days after admission, the hemoglobin was 72% and the red cell count was 4,120,000. His general condition was satisfactory. He was taking a selected diet and alkali powder, was permitted to be up and was permitted to go home in the ambulance, where he was kept on an ulcer diet and given aluminum hydroxide and alkali powders. There has been no further bleeding. Patient has gained weight and strength and repeated blood counts have shown that he has held his gain in erythrocytes. He was permitted to return to his business one week ago and he says he feels better than he has in a year or more. The last examination showed that the systolic blood pressure was 150, diastolic 90. On February 7 a fluoroscopy was done of the stomach and duodenum and Dr. Clark's report is that there is a deformity in the duodenum commensurate with ulcer. The future of this patient is rather uncertain, as we feel that we are dealing with an arteriosclerotic type of individual who has an ulcer which, in all probability, will have a tendency to have recurrent hemorrhages and the question is whether we should continue to treat this patient conservatively and symptomatically, or should we, in the near future, have him return to the clinic for surgical treatment of a potentially bleeding ulcer.

Comment: In the last few months, considerable has been written about the treatment of bleeding ulcer. It is probably the general consensus of opinion that the mortality from bleeding ulcer is not as great as, in fact, it really is. Allen, in an article in SURGERY of November, 1937, states that at the Massachusetts General Hospital over a period of ten years a diagnosis of duodenal ulcer was made in 1,002 cases of ward patients. Of these 1,002 patients, 390 had gross bleeding, which was detected while under observation in the ward, 94 bled severely enough to produce shock and acute anemia. In addition, 48 bled sufficiently to reach the minimum level, that is, to be stated as an emergency state, and 13 of these patients bled to death. The commonest causes of bleeding from the upper gastro-intestinal tract is duodenal ulcer, gastric cancer, gastric ulcer, esophageal varices, gastritis, gastrojejunal ulcer, and leinomyosarcoma.

It has been found that the age of the patient has more to do with the spontaneous cessation of bleeding than any other factor. In ninety cases of duodenal ulcer who bled freely before the age of fifty, only four died. In 42 cases who were fifty or over, 14 or 33 1/3% of the cases died. An interesting fact is that the chronicity of the ulcer, the habits, the occupation, the previous bleedings, seem to play no part in the question of recovery, as nine out of twenty fatal cases died from the initial hemorrhage.

As to the treatment it is a consensus of opinion that, in those cases that are under fifty and which have the more pliable blood vessels, conservative measures are indicated. In the older age group, Finesterer has laid down his accepted 48-hour time limit, that is, operation being performed within the first 48 hours of bleeding in this type of case, because if these cases are permitted to go on without surgical interference, the mortality is 33 1/3% when this type of case is treated conservatively and only 5% when treated surgically in his hands. Finesterer's procedure is to use the direct tamponade in those extensive ulcerations on the posterior wall of the stomach which invade the pancreas, and then to do a duodenal transsection proximal to the ulcer and to do a gastric resection on the distal two-thirds of the stomach. In this way, he is able to control the blood vessels which go into the ulcer bed, without directly attacking the ulcer. The procedure of Allen has been approximately the same. Prior to 1932, they transsected the antra, turned in the ends and did a posterior gastro-enterostomy. His results were disappointing because of the development of stomal ulcers or activity of the old ulcer. Since 1932, he has resected the distal one-third of two-thirds of the stomach and, if possible, the ulcer-bearing portion of the duodenum. In all these cases, the Polya method of anastomosis was followed. Some of these cases have had recurrence of ulcer with bleeding, but none has died.

TYPHOID FEVER

R. A. Street, Jr., M.D.

Patient: White female, age 36, was first seen on December 15, 1939, at home.

Chief Complaint: Malaise, aching, non-productive cough, and some fever, especially in the afternoon and evening. There was no headache and no abdominal pain at this time, but patient stated that she had no appetite and, at times, was nauseated. She had taken very little nourishment in the past two or three days, except liquids. Patient appeared acutely ill.

Temperature was 100.6°F, pulse 84, respiration 18. There was no enlargement of the spleen at this time, and no tenderness in the abdomen. The lungs showed a few fine rales over the bases, but no change in breath sounds or other changes. The throat was red, but there were no ulcers present. She was given cough medicine and sedatives as necssary, and advised to continue liquids and report on condition in several days. Nothing more was heard from her for several weeks.

She came into the clinic on January second, stating that she had several chills every day for the past week, followed by rather high fever and general aching, and malaise and considerable nausea. Temperature at this time was 100°F, pulse 90, respiration 18, blood pressure 110/70. Patient appeared much more acutely ill than at previous visit and seemed to have lost some weight and strength. She stated that her cough was much better and did not complain of any headache at this time. Spleen was definitely palpable at this time.

She was admitted to the hospital. Blood count on admission showed 14,700 leukocytes, with 75% polymorphonuclears and no malaria. Urinalysis was essentially negative. Blood Widal did not show any agglutination in typhoid para "A" or "B." Undulant fever was negative. She was put on intensive quinine therapy and given several intravenous injections and five (5) grains every four hours by mouth, with some improvement. She was discharged on the fourth, but still had some fever. She was again seen in the clinic on the sixth, eighth and ninth, and still having chills and fever in spite of intramuscular injections of quinine and continued quinine bisulphate by mouth. The spleen was not as large, but was still palpable. She was again admitted to the hospital on the ninth because of continued fever, chills and nausea.

This time a blood culture was obtained precautions, a non-residue diet, and chlorine water, drams 2, t.i.d. Stools were never loose, but bowel movements were normal during practically the entire course.

For the first week her general condition did not show any improvement, and not until about the eleventh day in the hospital did she begin to show a decline of temperature and feel considerably improved. A check on the blood Widal on January 22 showed agglutinations up to dilutions of 1-80. She was allowed to go home on the twenty-third, careful instructions being given regarding disposal of waste matter and use of dishes and utensils. She was seen again in the clinic on February 7. She had gained weight, had not noted any fever for the past week, was eating well, and still taking the chlorine water three times a day. Patient felt fine and had no particular complaints. Blood Widal was checked again and found to be negative in all dilutions. She was advised to send in a specimen of stool but this has not yet been done.

This case was rather unusual because of the failure to find any evidence of typhoid in the Widal after the protracted course of the fever had been going on for some two to three weeks, and the fact that the blood culture did show the presence of bacillus typhosus.

WOMAN'S AUXILIARY
TO THE MISSISSIPPI STATE MEDICAL ASS'N

President.................. ....Mrs. John B. Howell
Canton
President-elect ....Mrs. Hugh Johnston, Jr.
Vicksburg
1st Vice President...... ....Mrs. C. C. Hightower
Hattiesburg
2nd Vice President.... ....Mrs. Henry Boswell
Sanatorium
3rd Vice President........ ..Mrs. F. L. Van Alstine
Jackson
4th Vice President... ......Mrs. Temple Ainsworth
Jackson
Recording Secretary................Mrs. H. C. Ricks
Jackson
Treasurer..................... Mrs. J. D. Simmons
Cleveland
Parliamentarian................Mrs. F. E. Rehfeldt
Jackson

Councilors: 1st district, Mrs. T. G. Hughes, Clarksdale; 2nd district, Mrs. C. M. Roberts, New Albany; 3rd district, Mrs. W. L. Orr, Fulton; 4th district, to be appointed: 5th district, Mrs. L. H. Clark, Vicksburg; 6th district, to be appointed: 7th district, Mrs. L. L. Polk, Purvis: 8th district, Mrs. W. K. Stowers, Natchez; 9th district, Mrs. D. J. Williams, Gulfport.

ADAMS COUNTY AUXILIARY

Mrs. Lucien Gaudet

Mrs. Homer Whittington was hostess to a lovely meeting of the Auxiliary to the Adams County Medical Society with a social hour and buffet supper served following the meeting.

All about the home were decorations of colorful flowers of the season.

There was an election of officers for the year:

President, Mrs. Frances Dixon; pres.-elect, Mrs. Homer Whittington; secretary-treasurer, Mrs. Andrew Hedmeg; first vice-president, Mrs. H. M. Smith; second vice-president, Mrs. W. K. Stowers; third vice-president, Mrs. Lucien Gaudet; fourth vice-president, Mrs. Markus Beekman.

For the supper following the meeting the table set in the dining room was exquisite with clusters of spring blooms used as a centerpiece, between candlesticks at either end holding lighted tapers. Mrs. Whittington's sister-in-law, Mrs. Wood of Picayune, presided at one end of the handsomely appointed table.

The event brought together a large gathering of members who meet throughout the season at lovely social affairs.

ISSAQUENA-SHARKEY-WARREN AUXILIARY

Mrs. Edley Jones

One of the most delightful and unusual meetings of the year was that of which Mrs. W. C. Pool of Cary was hostess.

Mrs. Pool extended a special invitation to the membership of the Isaquena-Sharkey-Warren Medical Auxiliary to meet in her charming new home.

The business session was held first at which time Mrs. F. M. Smith, our new president, presided. It was decided to make the annual contribution to the Preventorium.

Members of the Auxiliary were especially pleased to have with them Mrs. John Howell of Canton, state president, who brought greetings from the state organization.

Following the business, Mrs. Sidney Johnston, the program leader, reviewed the much discussed book, *The Horse and Buggy Doctor* by Arthur E. Hertzler. Mrs. Johnston's treatment was both interesting and comprehensive and proved one of the most enjoyable of the day.

At the conclusion of the regular session Mrs. Pool served a delicious three-course luncheon for which the table was beautifully set with a centerpiece of sweet peas and attractive place cards.

Our hostess had planned an entertaining program during the luncheon featured by readings given by Mrs. Darden and Mrs. Dent. Contests were given in which all the members participated. The last event on the program was the horse shoe pitching contest accompanied by a wish for 1939.

The following officers were elected for 1939:

President, Mrs. F. M. Smith; pres.-elect, Mrs. John Dent; first vice-president, Mrs. L. S. Lippincott; second vice-president, Mrs. George Street; third vice-president, Mrs. W. C. Pool; secretary, Mrs. L. J. Clark; treasurer, Mrs. D. A. Pettit; historian, Mrs. S. W. Johnston; chairman of press and publicity, Mrs. Edley Jones; chairman of public relations, Mrs. W. C. Pool; chairman of prevention, Mrs. B. B. Martin.

v

SOUTH MISSISSIPPI AUXILIARY

Mrs. T. E. Ross, Jr.

The Woman's Auxiliary to the South Mississippi Medical Society held its quarterly meeting as scheduled during 1938. The meetings alternating between Laurel and Hattiesburg to coincide with the doctors' meetings.

Contributing to the Preventorium fund, sponsoring a contest for the Preventorium Essay and providing a layette has been the foremost work of this group.

The winning essay was written by Mollye Maye Bethea, daughter of Dr. and Mrs. S. E. Bethea.

Five new members from Laurel and four from Hattiesburg have been added to the Auxiliary.

The Christmas party for the Doctors was a delightful affair and was enjoyed by a host of members and visitors.

The next meeting will be at Stafford Springs on March 9.

The new members are: Mrs. J. S. Gatlin, Mrs. J. C. Butler, Mrs. J. E. Green, Mrs. A. R. Perry, Mrs. C. H. Ramsey, all of Laurel, and Mrs. Z. B. Graves, Mrs. E. W. Green, Mrs. R. E. Schwartz and Mrs. E. S. Busby of Hattiesburg.

THE FOURTH DISTRICT ORGANIZES ITS AUXILIARY

Mrs. R. C. Elmore, Councilor

Thursday, February the ninth, Mrs. John B. Howell, our state president, entertained a number of the members of the Fourth District at a lovely luncheon in her home in Canton.

After an inspiring talk by Mrs. Howell, organization of the Fourth District was perfected. Mrs. P. B. Brumby of Lexington was elected president, Mrs. W. S. Guyton of Pickens, treasurer and Mrs. R. C. Elmore of Durant, secretary.

A meeting of the new organization was held in the home of Mrs. P. B. Brumby, February 22. Mrs. Howell, state president, and Mrs. Hugh Johnson, Vicksburg, president-elect, were in attendance.

Mrs. Lamley, mother of Dr. J. J. Kazar, of Tchula, donated a year's subscription to *Hygeia* for the Holmes County Public Library. Several subscriptions were taken by members of the auxiliary.

A Doctor's Day was planned for the near future.

After the business program a social hour was enjoyed and delightful refreshments were served.

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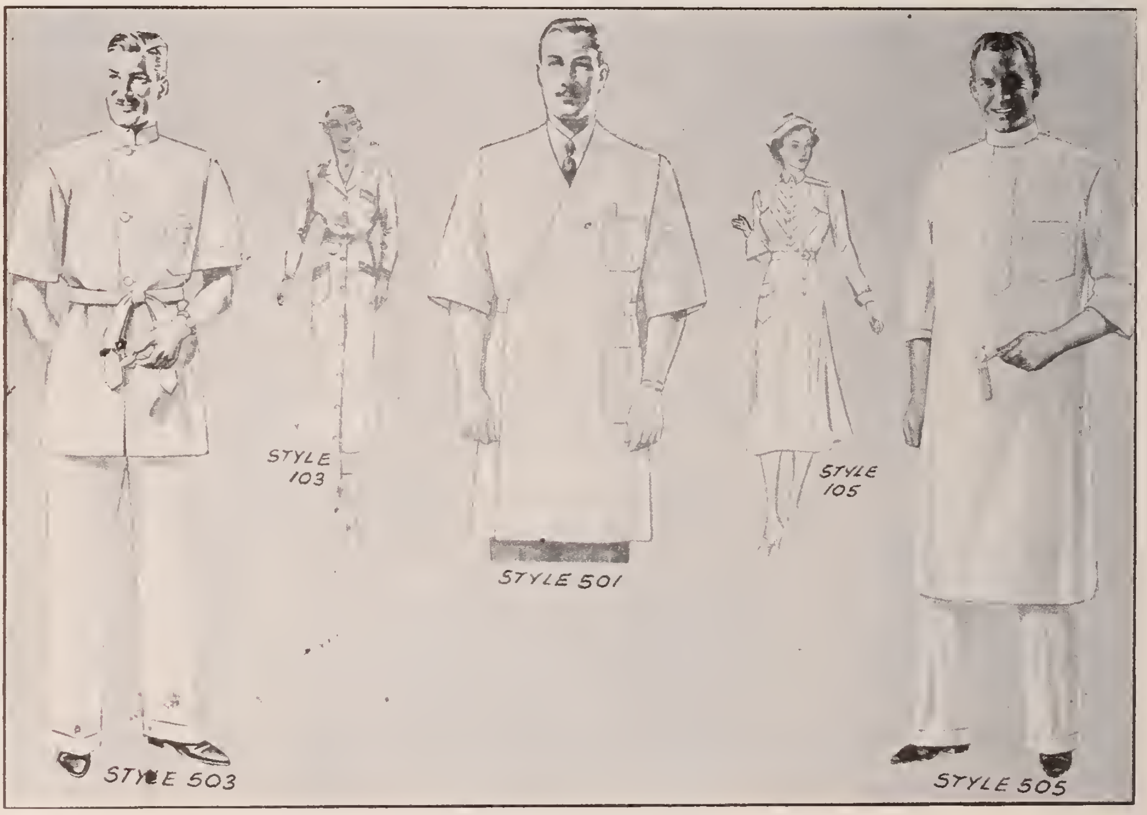
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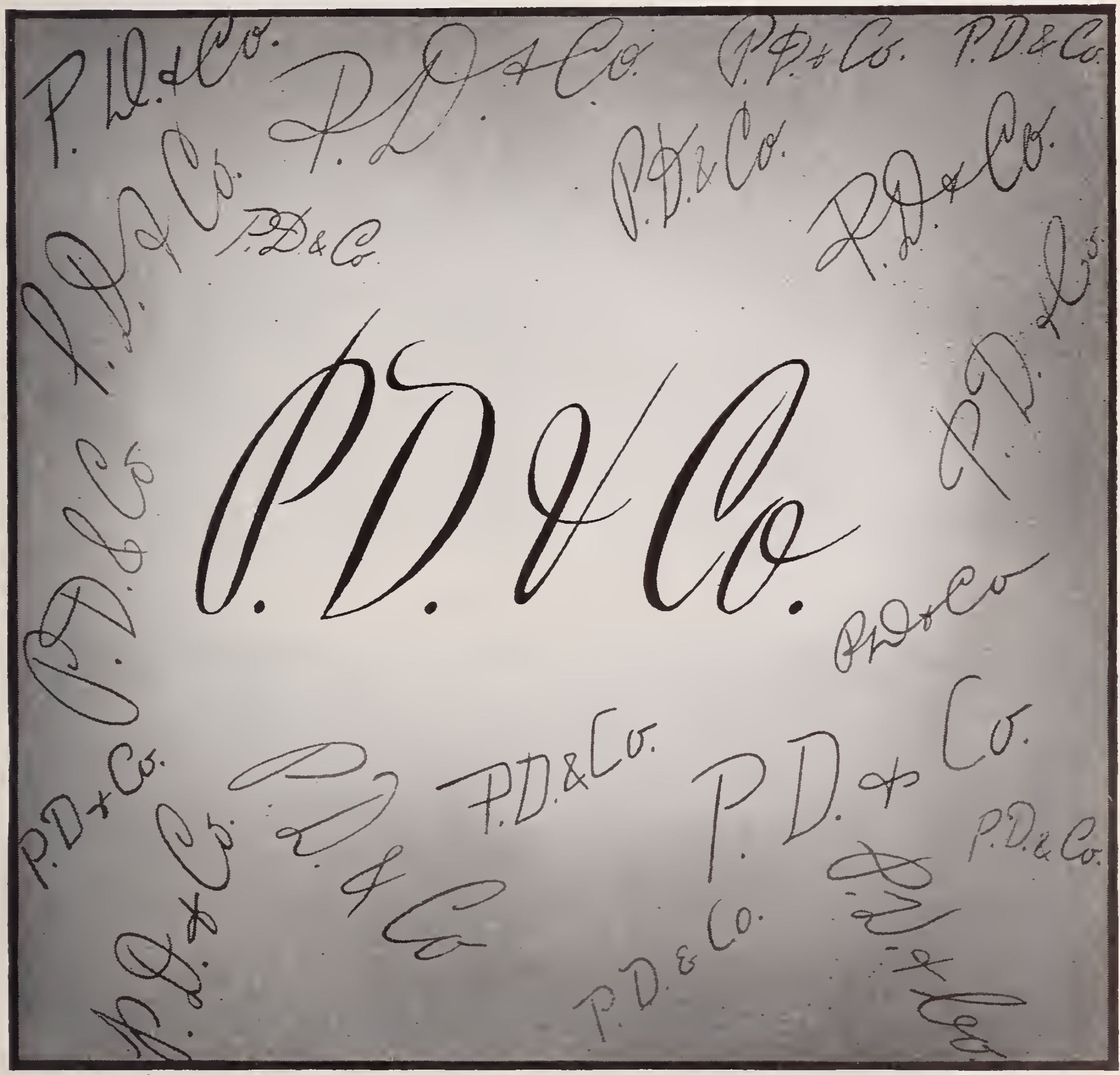

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The Care of the Premature Infant*

JULIUS H. HESS, M.D.
CHICAGO

I wish to express my thanks for the opportunity of talking to the members of the Mid-South Postgraduate Assembly on the subject of "The Premature Infant." All matters pertaining to the care of these small infants have interested me greatly during the past 25 years. The results which we have experienced in the care of the premature infant have been the source of a great deal of satisfaction. I am sure that a review of the mortality and morbidity rates among the newborn in Illinois and in Tennessee cannot help but convince us that we are making a very considerable progress in lowering both morbidity and mortality rates.

In Chicago we have attempted to apply the institutional procedures of Sarah Morris Hospital to a city-wide program for the care of prematurely born infants. It is my belief that the routine practiced has not alone lowered the death rate among premature infants but it has also been an influencing cause in the lowered mortality in Chicago among all newborn infants.

The statistics for Tennessee during the five-year period, 1933-1937, show a *downward trend in infant mortality* in the three age groups as shown in the following table:

TABLE I

	Under 1 day	1 day to 1 month	1 month to 1 year
1933	15.2	23.5	30.4
1934	15.1	23.3	35.1
1935	14.7	19.2	29.2
1936	13.7	20.6	33.5
1937	13.8	18.3	28.6

For comparison the statistics for Illinois and Chicago are shown in

TABLE II

	Birth Rate Per 1000 Population		Infant Mortality Under 1 Yr. Per 1000 Live Births				
			Illinois			Illinois	
	Illinois	Chicago	State	Rural	Chicago	White	Negro
1922	19.8		76	68		75	127
1925	19.1		72.5	70.8		70	123
1930	20.5	17.2	56	59	53.4	54	90
1935	14.3	13.8	46	50	40.1	45	70
1936	14.29	13.4	46.7	52.2	38.5		0
1937	14.6	13.8	43	46.7	37.8		
1938 (11 Months)			41.2	45.7	35.1		

OUTSTANDING FACTS

1. Rapid decline in birth rate in both states —1930 to date.

2. Striking decline in mortality under one year—1930 to date.

3. Early higher mortality in cities.

4. Since 1930 higher mortality in rural areas.

5. Chicago lowered rate since starting city-wide plan.

While a very satisfactory improvement has been noted in the lowering of infant mortality in your state and my own, more especially in the last three years, there is still room for improvement. These results are attributable to a closer understanding and cooperation by the practicing physicians and the public health officials. In Illinois this is true to a remarkable degree. As stated, there has been a steady decline in the total deaths during the first year of life. On the whole, however, there has been little decrease in the death rate in the first month of life which accounts for nearly half of the total loss of life in the first year. The situation as pertains to the first day and first week after birth has until recently, shown only a minimum decrease in the mortality rate. More than one-half of the deaths of the first month are in the premature infants. We may, therefore, state that the field in which the least has been accomplished is in the saving of infant lives in the first days and months, and with those cases with associated pathology during pregnancy and abnormal labor.

---

*Read at the meeting of the Mid-South Postgraduate Medical Assembly, Memphis, Tenn., Feb. 17, 1939.

The Premature Station at Sarah Morris Hospital, established in 1922, was the first of its kind in Chicago that was willing to receive premature infants born in other hospitals and in homes. The demand for such a station is evident, as shown by the gradual increase in the number of patients admitted, from nineteen in the first year of operation to 380 in 1938, with a total of 3151 up to January 1, 1939. As early as 1934 the station became overtaxed and provision was made for the opening of a station at Cook County Hospital to care for infants born in the hospital and of patients received from other sources. The Cook County Hospital station for premature infants admitted 253 infants in 1934; 286 in 1935; 255 in 1936; 343 in 1937; and 426 in 1938. At Cook County Hospital all patients are treated free of charge, and at Sarah Morris Hospital approximately 75 per cent receive free or very low cost service. At Cook County Hospital between 85 and 90 per cent are born in that hospital while of those treated in Sarah Morris Hospital only about 20 per cent are born in Michael Reese Hospital.

Infant death rates in many large cities have remained at much the same percentage with relation to the total of births during the five years preceding 1935. In Chicago the deaths per thousand live births (under one year of age) were: 1930, 53.4; 1931, 56.4; 1932, 48.2; 1933, 48.8; 1934, 47.7; 1935, 40.1; 1936, 38.5; 1937, 37.8; and 1938, 35.1. A study of the reported causes of death led to the belief that efforts to reduce the death rates further must be directed toward conditions associated particularly with early infancy, such as maternal illness, birth injuries, premature birth and congenital malformations.

In Chicago a survey carried out by the United States Bureau of the Census during 1935 showed that there were 99.5 per cent registration of births. The infant death rate of 40.1 for 1935 and 38.5 for 1936 and 37.8 for 1937 and 35.1 for 1938, may therefore be considered as a true figure of what is occurring in Chicago. It should also be noted that the stillbirth rate has declined during the same period, 30.1 for 1933; 29.2 for 1934; 26.9 for 1935; 27.7 for 1936 and 27.2 for 1937. The smaller number of infant deaths recorded should therefore exclude the thought that there might be a tendency to classify as stillbirths infants born alive but dying soon after birth.

THE CHICAGO CITY-WIDE PLAN FOR THE CARE OF PREMATURE INFANTS

With all these facts in mind and believing that deaths from prematurity might be lowered by well organized effort, the Board of Health of Chicago initiated the Chicago city-wide plan for the reduction of deaths associated with and due to prematurity.

Prematurity was stated as being the cause of death in 749 infants during 1934. During 1935, of 1,361 infants who died under 30 days of age, 690 or 50.7 per cent, and in 1936 of 1,212, 518 or 42.7% and in 1937 of 1,252, 521 or 41.6% all were reported as being premature. A reduction in morbidity and mortality rates among prematurely born infants seemingly offered a promising field for lowering the death rate among new-born infants. It was felt that if the same principles established in conducting the premature station at Sarah Morris Hospital could be applied in a Chicago-wide program, many premature infants now lost might be saved.

The Sarah Morris Station offers:

1. Ambulance service by the hospital.
2. Premature ward care, with special equipment for oxygen therapy and other types of emergency therapy.
3. Nursing service by a trained personnel.
4. Breast milk obtained from wet nurses and visiting mothers.
5. Field nursing service for instruction of the mothers, special attention being given to the promotion of breast milk secretion. Breast milk in the home reduces the number of hospital days.
6. A supply of a simple type of heated bed, loaned for the use of graduates in the home. This is of special value in reducing the number of returned cases due to acute illnesses after discharge.

7. An outpatient clinic maintained for instruction of mothers and the care and supervision of graduates not having private physicians.

This program was an attempt to apply institutional procedures already found successful in a hospital expanded to meet the demands of a large metropolitan community. The City-Wide Plan for Chicago was started in March, 1935.

STATE AND OTHER CITY-WIDE PROGRAMS

Eight of the 48 states as well as the District of Columbia and the Territory of Hawaii have some plan contemplated or already in operation for improving the care of premature infants. The most complete plan is that now being carried on by Massachusetts.

During 1937 the Commonwealth of Massachusetts initiated its State-Wide Program on the care of Premature Infants, its objective being the reduction of the premature death rate and improvement of standards for the care of premature infants. They provide transportation through the local boards of health to nearby hospitals adequately equipped to care for infants weighing 5 pounds or less who cannot adequately be cared for in their homes. Hospital maintenance is provided free for indigents by the local boards of public welfare.

In Massachusetts about three-fourths of all births occur in hospitals. The hospital center part of the program is State Wide outside of Boston. Forty-eight centers have been established. The hospitals are selected with a view toward strategic location and the grade of service given by the hospital.

The nursery supervisors of the hospitals which have been accepted as premature centers are given a two-weeks course at the Boston Lying-In Hospital. The Department of Public Health pays the tuition of the nurse and also her traveling and living expenses during this course. A consultant nurse from the Department of Public Health is available for consultation services to nursery supervisors in the hospital centers.

The New York State Department of Health is also inaugurating a statewide program. Special centers have been in operation in Albany and Syracuse since the first part of 1938. Plans are under way for Schenectady, Utica, and Troy. In other areas, portable heated beds have been made available for loan purposes for infants cared for in the home in rural districts. Transportation is provided for taking the infants to nearby hospitals.

Dr. Edward S. Godfrey, commissioner of the New York State Department of Health, in answer to my recent inquiry as to the present status of their state-wide program, writes as follows:

"The problem of prematurity is considered part of the general aim to focus attention, effort and study toward the reduction of neonatal mortality and the loss by stillbirths.

"The philosophy of the New York State Department of Health is that prematurity is an effect or expression of the larger problem, rather than a cause in itself; and that cause must be sought in the mothers or perhaps, more correctly in the parents. In other words, the program for the premature infant is admittedly *palliative,* in this broader sense.

"Our attack at present is directed toward the urban centers, in which most of the premature births occur, or are received, in the hospitals.

"We realize that many hospitals in the state are not prepared, either in the matter of physical equipment and space, or in the amount and special type of nursing service necessary for the best care and ultimate saving of the premature infant. Many public health nurses have had little or no experience or training in the more expert care of these infants, as recently developed in some parts of the country.

"The premature may receive expert care in the hospital, but on discharge of the mother it needs equally intelligent public health nursing supervision in the home. It may not be possible for the premature born in the home to be transferred to a hospital because of economic status of the family, distance, extreme weather conditions, etc. It is planned, therefore, to afford each year opportunities for special training to a limited number of nurses, sending them in pairs, from the same locality to training centers:

(1) *A registered graduate nurse from a representative hospital staff,* who is in a teaching position, or who will be allowed to teach what she has learned to other staff nurses on her return; the other similarly qualified, from (2) the local public health agency. There is thus created an interlocking interest and coordination.

"The baby in the hospital benefits while there and can be discharged to competent public health nursing supervision; the infant born at home benefits by receiving more intensive and expert care than would be ordinarily available to the full term infant. The hospital nurse returning to duty teaches other nurses, enlists the interest of the physicians and hospital authorities in providing improved facilities; the public health nursing agency revises its staff education program, and there is a similar expansion of knowledge and facilities.

"Portable heated beds have been made available in rural communities, for loan purposes to local physicians, either to transport infant to hospital, or to lend to the family where the premature is cared for at home; they have also been placed in a few small hospitals of limited resources and facilities."

A similar program is in effect in New Jersey, Iowa and Minnesota, Tennessee, West Virginia, Colorado, Nebraska, Wyoming, South Dakota and Hawaii. These states are, or soon will be in position to provide a simple type of heated bed and special booklets on the care of the premature infant as requested by attending physicians.

At the annual meeting of the American Academy of Pediatrics held in New York City on May 19, 1935, the following resolution was passed in an attempt to define prematurity:

"For statistical purposes and comparison of results of care, a uniform standard for diagnosis of prematurity is important.

"A premature infant is one who weighs 2,500 gm. or less at birth (not at admission) regardless of the period of gestation.

"All liveborn premature infants should be included, evidence of life being heart beating or breathing."

Therefore, premature infants may be classified for practical clinical purposes to include any infant, whether a single or multiple birth, born prematurely, at term or even past term, whose weight at birth is below 2500 grams (5½ pounds). The inference is that the infant is not completely prepared for full, normal, independent extra-uterine life. There may be, however, only a relative body weakness in the absence of inherited constitutional debility and malformations. Full consideration must be given in the case of each individual infant to the precipitating causes in the parents and the infant, as well, which might have led to premature delivery or pathological intra-uterine development.

It is well known that the younger and smaller the fetus when leaving the uterus the greater are the difficulties to be overcome in carrying out required body functions necessary to life and therefore, the consequent lower vitality.

A second resolution passed at the same meeting of the American Academy of Pediatrics expressed the desirability of registering mortality in the following manner:

"1. In weight groups: number of cases should be studied in five weight groups—

(1) Under 1,000 gm.
(2) 1,000-1,250 gm.
(3) 1,251-1,500 gm.
(4) 1,501-2,000 gm.
(5) 2,001-2,500 gm.

"2. Age at time of death of various weight groups.

"3. Age at time of admission of infants received from other hospitals and homes."

BENEFIT TO THE INFANT OF PROLONGED GESTATION: Clifford has estimated the expected intra-uterine weight gains be:

	GAIN PER WEEK
Fifth Lunar Month	120-150 gm.
Seventh Lunar Month	180-240 gm.
Ninth Lunar Month	300-360 gm.

The value of continuing intra-uterine life as long as possible is well evidenced by the mortality rate based on weights taken from the records at the Sarah Morris Station.

MORTALITY RATES BASED ON WEIGHT	
Under 1,000 gm.	15.5%
1,000-1500 gm.	43.3%
1,500-2,000 gm.	75.2%
2,000-2,500 gm.	87.2%

It can easily be realized, therefore, that 2 to 4 weeks of prolonged intra-uterine life is of great importance in reducing the mortality. It is also to be remembered that the younger the fetus, the graver the danger of intracranial hemorrhage.

OBSTETRICAL ANALGESIA: Any analgesic given to the mother affects the baby to some degree. Irving in a study of 500 consecutive deliveries where no anesthesia was used, found only 10% of the babies required resuscitation. In a series receiving scopolamine-morphine, he found 60% had to be resuscitated, and in a group in which phenobarbital was administered, 40% required resuscitation. These figures refer to a study of deliveries of full term infants. One can easily realize the increasing danger from various analgesics given in excess to the mother in the case of the prematurely born infant.

Immediately after respiration has been initiated in the infant suffering with extreme narcosis, oxygen or oxygen-CO^2 therapy should be instituted.

PROVISION FOR THE PREMATURE DELIVERY: In case of expected premature labor immediate preparation should be made for the reception of the infant into a proper invironment. The preparation should not be delayed until labor has begun, otherwise many viable premature infants will be lost. If the proper facilities cannot be furnished in the home, the mother should be persuaded to enter a hospital before confinement.

Preparation for the proper conduct of labor should be complete, whether in the home or hospital. The mother should be prepared with great care and every effort made to conduct an aseptic labor. The room should be selected and equipped to meet the needs for labor and the requirements of the infant. It should be well ventilated and properly heated to at least 70 degrees F.

Avoidance of mechanical trauma incident to delivery, chilling of the infant, and exposure to infection are important factors in reducing mortality.

INITIAL CARE: A warm sterile pad, towel, or preferably a blanket should be in readiness to receive the infant. As soon as the head is born, the face and eyelids should be gently sponged with sterile gauze and the mucus should be removed from the air passages by carefully wiping with sterile gauze. Upon delivery of the body the infant and the cord should be protected from contact with feces and other foreign mater. The infant should be placed so that the head is dependent, allowing the mucus and secretions, which may have accumulated in the respiratory passages, to escape.

TYING AND SECTION OF THE CORD: The time elapsing between the birth of the infant and the tying of the cord will depend on the general condition of the infant and to some extent on the obstetrician's ability to prevent chilling of the infant. In the absence of marked asphyxia, it is well to allow the pulsation of the cord to become weakened or to disappear before ligation. This usually requires from 1 to 5 minutes, during which time the infant will receive from 30 to 60 cc. of blood from the placenta. This blood should be conserved when possible without a risk.

The cord should not be tied too closely to the skin. Great care must be exercised in tying the cord to prevent severing it with the ligature which is easily accomplished in the premature. The cord should be sufficiently long to allow for a second ligature.

The possibility of asphyxiation of the premature infant must be borne in mind throughout the entire labor. Any accumulation of secretions or aspirated material should be removed by inverting the child and gently wiping the mucus from the throat or by aspiration by means of a catheter. In the more extreme degrees of asphyxia a warm bath and the institution of artificial respiration by regular and gentle compression of the chest followed by the administration of oxygen may forceful methods of inducing artificial respiration must never be practiced.

The irritation of the catheter in the pharynx will frequently reflexly stimulate respiration. If the infant appears to be recovering spontaneously it should be left alone.

Administration of oxygen, about 120 bubbles per minute, may be of value if administered through a catheter inserted in the nose or mouth, or through a properly constructed mask. If an oxygen chamber is available the child should be placed in an oxygen air mixture of 40-50 per cent oxygen.

All premature infants, whether or not showing signs of asphyxiation at birth, should be carefully watched for cyanotic attacks during the first days of life, as such attacks may develop suddenly and without warning. They may be due to a defective pulmonary circulation, a congenital atelectasis, or intracranial hemorrhage. At other times they are precipitated by intra-abdominal distention interfering with cardiac or respiratory action. Oxygen therapy offers the best single method of resuscitation.

NEONATAL INITIAL CARE—CARE OF MOUTH AND NOSE: Every effort must be made to avoid trauma of the mucus membranes of the nose and mouth because of the danger of secondary infections. Much can be accomplished by placing the child with the mouth downward or laterally with trunk elevated for a few hours, so that the mucus can gravitate toward the nose and mouth.

Care of Eyes: One per cent silver nitrate solution or 25 per cent argyrol should be used to prevent ophthalmia neonatorum. The nitrate of silver solution should be neutralized with a normal saline solution. Not infrequently the application of silver nitrate will result in some inflammatory reaction of the conjunctiva in the first 6 to 12 hours after its application. This is especially frequent in premature infants and is relieved by cold applications. This is not to be confused with the more serious specific ophthalmia which may develop on the second or third day. In all cases of doubt a microscopic examination of the purulent discharge must be made. An old silver nitrate solution which has undergone decomposition should be avoided, as such solutions are far more prone to irritate the sensitive conjunctiva.

Care of the Skin and Genitalia: It is of the greatest importance that premature infants shall be handled as little as possible. At Cook County Hospital during the past year we have not bathed or oiled the infants during their first week, having adopted the plan introduced by Sanford of allowing the vernix caseosa to remain on the infant, simply wiping the region of the eyes and buttocks with sterile water. Since the introduction of this plan there has been a minimum evidence of skin irritation and no cases of impetigo. Others may prefer a mineral oil cleansing, or in case of larger infants, a soap and water sponging.

Daily Routine: The body temperature must be taken through the rectum and should be recorded morning and evening. An individual thermometer should be furnished for each infant. Undue exposure and trauma should be avoided from the moment of birth. Fluctuations in body temperature are more marked than in the full-term infant, with a tendency toward hypothermia. A minimum of 96 degrees F. should be considered the lowest compatible with progress. Attempts should be made to limit the daily fluctuations to 1½ degrees F.

The temperature of the heated bed should be varied with the needs of the individual infant. Small prematures and congenital weaklings with marked hypothermia should temporarily have a surrounding temperature varying, from 85 degrees F. to 95 degrees F. Older and stronger infants are better placed in a bed at 80 degrees to 85 degrees F. As the infant develops its vital functions and the subcutaneous fat increases, the temperature of the bed should be gradually lowered to that of the nursery, which should be kept at about 75 degrees F.

Removal from the bed should follow definite indications. Changing napkins and the ordinary routine measures can be carried out in the bed.

The body must be insulated by proper clothing which will be described.

The body fluids, after the first few days, must be maintained by an intake of from one-eighth to one-sixth of the body weight in fluids in 24 hours, and this must include a caloric intake of more than a sustaining diet, 70 calories per kg. after the first few days of life.

Respiratory and circulatory functions must be protected and at times stimulated.

Hyperpyrexia frequently results from an overheating of the bed, and when a high temperature is noted the temperature of the bed should be considered as a possible cause.

Infections of all kinds tend to the development of fever, but, on the whole, the reaction is less than in the full-term; however, the exception may be true. Massive pneumonias have been found at autopsy which were unassociated with temperature above the average normal.

Weighing should be done with a balance scale at a specified time each day as a part of the general routine. The infant should, unless contra-indications exist, be undressed for the purpose, and weighing is best done before the bath.

Those fed at the breast must be weighed before and after nursing, and the food taken should be recorded.

Loss of body-weight during the first days of life occurs almost constantly in premature infants, the percentage loss being greater in the premature than in the full-term infant, and on the whole, they are much slower in regaining their birth weight.

Most infants regain their birth weight by the eighteenth to the twenty-first day, with a daily gain averaging from 10 to 30 gm. (1-3 to 1 oz.) after reaching their lowest weight, which is usually about the fifth day.

Infants under 1500 grams may be considered as growing satisfactorily on an average daily increase from 10 to 20 grams (1-3 to 2-3 oz.). They will often double their birth weight in 75 to 90 days. Those from 1500 to 2000 grams usually double their birth weight in from 60 to 75 days.

Infant's Clothes: The wardrobe should be planned and completed in advance of labor. In emergencies this may not be possible. It is imperative to remember that preservation of body heat must be begun immediately after birth on the confinement bed itself.

Temporary Clothes: At birth the infant is received into a warm blanket and immediately placed in a heated basket or heated bed. In supplying external heat it should be remembered that these infants are easily burned, and such burns are usually fatal.

In small prematures for temporary emergency, a sterile cotton-pack which completely envelopes the infant, except for the face, may be applied. It should, however, be remembered that cotton is far inferior to wool in prevention of heat radiation. An improvised jacket, preferably of flannel, may be placed on the outside of the cotton to hold it in place.

To the cord, genital regions and anus, an easily changed pad of cotton or gauze combination may be applied. Whenever the infant becomes soiled, it is necessary to change the pad. This should not be neglected.

Permanent Clothes: In a well-equipped station several sets of special clothes should be provided. These should be kept sterilized in packets. With the open type of heated beds, all garments next to the body, except the napkins, should be made of light-weight flannel.

Care in the Home: The establishment and maintenance of properly equipped hospital stations are essential to the lowering of mortality, more especially in the larger cities and particularly among the proper classes. A careful consideration of the requirements for the results to be expected from their care in the home is equally essential and good results can be obtained.

In the care of these infants at home the same rules for asceptic nursing maintenance of body temperature, breast feeding and daily routine must be maintained, as suggested for hospital care.

When a bathroom is available only one other room need be supplied.

While the baby is being dressed or bathed, the nursery or bathroom temperature should be in the neighborhood of 80 degrees F. A gas or electric stove will be of assistance in accomplishing this. When a heated bed is in use, the sleeping room may be kept between 70 degrees and 80 degrees F., varying with the indications for the individual infant. It should be clearly understood that all visitors other than the attendants and physician must be excluded. Gowns and masks safeguard against infection.

Hospital Nursery Units: Special equipment is necessary, whether they are to be cared for in the obstetrical or children's division of a general hospital. The lack of proper arrangement for their care in general hospitals throughout the country represents a striking lack of foresight.

The equipment to be recommended is to a large extent dependent upon the method which is to be used for maintaining the body temperature of the individual infant.

1. Special nursery units in which ventilation, temperature and humidity are automatically regulated.

2. Ordinary hospital nurseries in obstetrical or pediatric departments in which the room temperature is fairly constant but which are without special means of ventilation and humidity control.

In wards of the second type individually heated beds must be supplied for the infants. They are also necessary for a limited number of the infants cared for in wards of the first type, as the smaller and more frail infants require a higher surrounding temperature than the larger and more mature ones. A combination of the superheated, regulated room with special beds for the exceptional infants is a combination to be desired.

Only a limited number of institutions have as yet air-conditioned units so constructed as to meet the requirements of these small infants for the preservation of their body temperature, to maintain an optimum humidity and to provide a constant and definite change of air. The construction of such a series of rooms to meet the requirements for normal and infected infants requires a considerable expenditure. The Boston and Yale Children's Hospitals have such rooms in sucessful operation.

Many new units for air-conditioning are being introduced which, however, vary greatly in their efficiency. It is to be remembered that maintaining and controlling temperature and humidity during the different seasons of the year offers a most serious obstacle to popularizing automatic control. This applies more especially to the summer months.

Blackfan and Yaglou believe that the humidity best suited for stabilizing the body temperature of premature infants should approximate 65%, with a room temperature of 75 degrees F. In the Sarah Morris Hospital, where no attempt is made automatically to regulate humidity, it varies more often between 40 and 55%. During the winter months, more especially, it is at times necessary to raise the humidity and this is accomplished by moistening sheets which are hung on ordinary ward screens. When the humidity is too high nurses not infrequently complain of personal discomfort.

EQUIPMENT OF THE STATIONS: It has been our desire to demonstrate that the care of premature infants can be accomplished in a practical manner in any well-organized obstetrical department or children's hospital. A station should provide at least one or more rooms and as far as possible the following equipment:

Individually heated beds for small infants.
Bassinets for graduates.
Oxygen therapy units.
Heated dressing table.
Sink with bathing slab.
Shelves for toilet articles.
Supply closet.
Scale.
High and low temperature registering thermometer.
Hygrometer, wet and dry bulb type.
Time clock, for recording time for feedings.
Electric heater for emergencies.
Screens.
Electric refrigerator.
Transportation ambulance for prematures.
Heated beds for home use (loaned to graduates for temporary use).
Ultra violet-ray lamp.
Electric breast pump.

NURSING STAFF: The selection of a personnel for the nursing staff of a unit established for the care of premature infants requires care. Nurses assuming these responsibilities must be intensely interested in their work. They must be willing to make many necessary sacrifices while the infant is passing through the critical stages. They must, at all times, be prepared to meet the emergencies of asphyxia and to counteract the spells of cyanosis. These factors in themselves require almost constant vigilance, otherwise, the work of previous days will go unrewarded. They must use good judgment to prevent over and under-feeding, as to a very large extent the size of the individual meal will be governed by the physical condition of the infant at the time of feeding. In no other class of patients is it so necessary to change or modify on short notice previous orders for diet. The nurse must know the indications for and the methods of administering catheter feeding, colonic flushing, tubbing, and the application of artificial respiration.

In hospital wards the constant changing of nurses, as is so frequently the case in meeting the curriculum for nurses' training in general hospitals, is found to be a great disadvantage. Better results are obtained when the nurse in charge has under her care assistants who need not necessarily be nurses in training, but preferably young women who are especially preparing themselves for the care of young infants, and who can be relied upon to stay in the station for long periods of time. Such women become expert in the handling of these infants, can frequently feed them with a minimum excitement of their pharyngeal reflexes, and soon learn to bathe and give them their exercise and massage, which is so essential to every infant in order to prevent "hospitalization."

The ideal nursing staff for such a station is, therefore, one consisting of a well-trained supervising nurse and a corps of assistants desiring this training and who are willing to remain in this service for a long period of time, together with a limited number of nurses in training.

CLINICAL RECORDS: A careful history is most important as much evidence which will have a direct bearing on the prognosis will frequently be elicited, as well as suggestions for feeding and therapy. The maternal history as to illness, previous pregnancies and their outcome must be elicited. The paternal history is also of prime importance. The presence or absence of acute illness in the home, more especially whooping cough, scarlet fever, diphtheria and septic infection should be investigated before the infant is discharged.

HOME INSTRUCTION—Social Service: Every hospital record should show the data of at least two social service investigations. This, while usually neglected, frequently reveals conditions in the home which make the early discharge of these infants impossible if their lives are to be conserved.

The first investigation should be made in the shortest possible time after the infant enters the hospital and the last just previous to the infant's discharge.

A nurse should visit the mother usually within the first twenty-four hours after the infant is received and instruct her in the care and expression of her breasts so as to encourage her in maintaining her supply of breast milk. Regular four-hour expression is advised, the mother being supplied with sterile bottles so that she may send or bring her milk to the station. This stimulates the milk supply and encourages the mother in her effort to produce milk for the future use of the infant. As soon as the mother's physical condition permits she should be requested to come to the station at stated times to receive instruction in the care of her small infant, and to nurse it directly at the breast if its development warrants it. This is a valuable educational feature insofar as the infant is concerned.

Before the infant is discharged from the station the nurse visits the home and instructs the mother in the necessary preparation for the infant's return.

Following the discharge from the hospital the nurse should visit the home one or more times weekly as may be indicated.

WET NURSES: The wet nurses express their breasts at regular four-hour intervals, five times a day, with an electrically-driven pump, or by hand expression. If there is any doubt as to the quality of the breast milk it is boiled for one minute.

It is my belief that it is a great advantage to be able to feed raw breast milk. This is not difficult to accomplish in the home or in the hospital where the mother has an ample supply of breast milk or where it can be obtained from available wet nurses. Where the source of breast milk is open to question it must be boiled. A freezing process similar to that used for holding ice cream is now available for this purpose. Freezing with dry ice results in minimum changes in the milk constituents. The small disc process which has been introduced in New York and is the one here alluded to, is not practical as now used where such large quantities of milk are required as in the case of Sarah Morris and Cook County Hospitals. For this reason we attempt to collect a milk as near sterile as possible.

In order to produce a maternal milk with as low a bacterial count as possible, the wet nurse removes her outer clothing and dons a cap and mask, putting on a short rubber apron below the breasts. She then scrubs her hands and nails and a nurse cleanses her breasts with soap and water, after which the wet nurse cleanses her own breasts with boric solution. When this is done she is assisted by the nurse in putting on a sterile gown with separate breast curtains. She then goes into the milk collecting room where her milk is collected in a sterile graduate and from this poured into graduated nursing bottles. The bottles are labeled and the milk is iced immediately. When larger quantities are to be preserved, the milk is poured into Mason fruit jars for fractional sterilization.

DIET OF NURSING MOTHERS AND WET NURSES: Although the diet of a nursing mother of a full-term infant may, in many instances, be unrestricted, it is not so with the mother of the premature or the wet nurse who may be supplying the breast milk. The following articles of food should be excluded from the diet of the wet nurses: highly spiced or seasoned foods, fried foods, also cabbage, turnips, cauliflower, onions, bananas and stewed fruits. Constipation should be relieved by diet, mineral oil, or enemas.

GASTRIC CAPACITY: In a post-mortem study of 34 stomachs under pressure of a column of 15 cc. of water, the average size of fetal stomachs was estimated as follows:

24 weeks	5cc.	32 weeks	18cc.
35 weeks	8 cc.	36 weeks	25 cc.
28 weeks	10 cc.	40 weeks	45 cc.

The stomach of the premature infant on a diet of breast milk is usually found empty at the end of one and one-half to two hours. That of the artificially fed requires a considerably longer period of time, depending upon the nature of the food administered, even in the case of feeding with predigested milk.

FEEDING SCHEDULE: Human milk is the food of choice for the premature infant and this applies more especially to small infants.

A regular feeding schedule must be instituted. The feedings of necessity vary as to number and size as well as to the quality of milk mixture.

The following is recommended:

First 12 hours after birth: No water or milk is given.

Second 12 hours after birth: The following schedule can be instituted for most infants. The quantity may vary with the age and development of the infant:

13th hour	boiled water	2-6 cc.
16th hour	boiled water	26 cc.
18th hour	breast milk	2-6 cc.
20th hour	boiled water	2-10 cc.
22nd hour	breast milk	2-10 cc.
24th hour	boiled water	2-10 cc.

Infants received several days after birth, which is true of many cases, must of necessity, be fed according to their condition when received at the station. The first few feedings should be minimum. Dehydration is often marked and demands special consideration.

Feeding from Second to Twentieth Day: For practical purposes, the second to the twentieth days may be grouped together as the second feeding period.

From the second day the infants should be fed regularly day and night, the number and times of feedings depending to a great extent on whether the food is given with or without the use of catheter, on the gastric capacity, and on the infant's general condition. Practically all infants after the second day receive eight feedings daily.

Beginning (in most cases by the second day) with from 20 to 40 cc. of human milk per kilogram (1/3 to 2/3 ounces per pound) of body weight, the quantity may be increased from 8 to 15 cc. daily per kilogram (1/8 to 1/4 ounces per pound) until, usually by the twentieth day, feedings averaging from 135 to 150 cc. per kilogram (2 to 2½ ounces per pound) can be given.

TABLE I

Breast Milk Schedule For Premature Infants

Day	2nd	3rd	6th	10th	20th
Per cent of weight	1-50	1-40	1-20	1-10	1-6
CC. per kilo	20	25	50	100	180
Calories per kilo	13	16	33	66	120
Ounces per pound	1-3	2-5	3-4	11-2	22-3
Calories per pound	6	8	15	30	50

Small increases should be made daily if well taken.

Most infants can approximate theseamounts.

TABLE II

Breast Milk Feedings Daily

Weight of Infants	1500 gms. or less	1500-2000 gms.	2000-2500 gms.
Second Day	20 cc.	30 cc.	40 cc.
Daily Increase	8-12 cc.	12-16 cc.	16-20 cc.

During the first days, further fluids, such as boiled water or one-half strength Ringer's solution are administered to compensate for the loss of body fluids through the kidneys, bowels, lungs and skin. The infant requires about one-sixth of its body weight of water, inclusive of that contained in the milk, in 24 hours while in the heated bed. Such quantities, however, should not be attempted on the first days; usually it will be possible to approximate one-eighth of the body weight in total fluids by the fourth day. The early feedings must necessarily be small and the increased feedings given gradually. The infants must be considered individually, as it is possible to formulate definite rules for feeding, at least during the first ten days.

Increases in foods are based on the weight of the infant and the infant's food tolerance. The smaller and the more premature the infant the more slowly the feedings are increased. For any premature under 1000 grams the amount is never increased more than 1 cc. at a time. Irrespective of the size of the premature, it is always started on a very small quantity and increased gradually, never over 3 cc. at a feeding.

Overfeeding, either through too rapid administration, too large individual feedings, or too rapid increase in the day's food, should be as conscientiously avoided as underfeeding.

It is necessary to supplement the feedings by giving water or one-half strength Ringer's solution between feedings until the milk feedings total one-sixth of the body weight per day. In the presence of persistent vomiting it will be necessary to resort to subcutaneous administration of fluids.

Human And Lactic Acid Milk Mixtures: To increase the protein content of the diet skimmed lactic acid milk (buttermilk) is added to the feedings of many infants in proportions to one part skimmed milk lactic acid milk to three parts breast milk. The lactic acid milk used is prepared by the addition of a lactic acid bacillus culture to sterilized skim milk. Powdered skimmed lactic acid milk to three parts breast milk is well taken by older infants showing stationary weight. Whole lactic acid milk, cultured or powdered, may later be used to replace the fat-free lactic acid milk.

The diet of the premature infant making a satisfactory gain should not be changed arbitrarily without a well-defined indication.

After the twentieth day the food requirements of the infant are well established. A careful observation of the weight, stools, disposition and, what is equally important, its body temperature will determine the future food requirements. The fluid requirement (milk and water) will, to a great extent, be governed by the temperature and humidity in the bed and room.

As the infant takes on weight and becomes fat, with a rounding of the features and the body, the total amount of the milk administered can be held at one-sixth, and, not infrequently, one-seventh of the body weight, and a normal increase in weight can still be maintained.

ARTIFICIAL FEEDING: Human milk is the natural food for the premature infant, for no other food can be fed to the same advantage. This is especially true of infants with a weight below 1500 grams.

All cow's milk mixtures ordered for the infant should meet the following requirements:

1. If fresh milk is used it should have been boiled for five minutes.
2. The mixture should have a low fat content.
3. It should precipitate with a fine curd.
4. Added carbohydrates should be increased more or less gradually from two to six per cent.

Many varieties of artificial diets have been suggested by different clinicians, such as simple milk dilutions, skimmed, evaporated, condensed, dried, rennet or reconstructed (similac, olac) and lactic acid milk preparations. To these mixtures carbohydrates are added. The results with these different milks are to a great degree dependent upon the physician's intimate knowledge and directions for the use of the individual food.

It should be remembered that the figures quoted for the feeding on breast milk are the maximum that can be assimilated and they may be excessive quantities for artificial feeding in the first weeks of life. When artificially fed these infants must at all times be closely watched for evidence of over-feeding, and the first evidence of digestive disturbances or of intercurrent infections should be taken as an indication for the feeding of human milk, whenever possible.

From the foregoing statement it is evident that slower increases in weight may be expected of the artificially fed.

RENNET MILK is prepared as follows: Whole cow's milk is boiled for five minutes, then cooled to between 104 degrees F. and 108 degrees F. It should be tested for temperature with a dairy thermometer. One rennet tablet (softened in a tablespoonful of cool, or boiled water) or one level teaspoonful of chymogen (Armour Co.) should be added for each pint of cow's milk used. The milk is then gently stirred for one minute.

The milk should be allowed to stand until it is well clabbered which takes from five to ten minutes. Then it should be beaten well with an egg beater which has been sterilized, until the milk is divided finely enough so that it will pass easily through the holes in the nipple. If boiled water is added to the milk it must be cooled before it is added otherwise large curds will form. The sugar may be added to the water used to dilute the milk. If the milk is not to be diluted then add the sugar directly to the milk. It may be necessary to enlarge the holes in the nipple moderately. Clumping will result if the milk is overheated at the time of feeding. Rennet milk has been the food of choice for many of our infants when breast milk was not available at the time of graduation from the station.

LACTIC ACID MILK may be made from whole or skimmed milk as indicated. If cultured it is prepared by adding lactic acid bacilli to pasteurized or boiled whole or skimmed milk.

Powdered lactic acid milk is prepared by mixing one level tablespoonful of powdered whole or skim lactic milk with each two ounces of cooled boiled water. It is to be beaten with an egg beater to insure a smooth mixture. Carbohydrates are to be added in amounts as ordered.

PROPHYLACTIC FOODS AND THERAPY: To counteract the loss of vitamin C in milk through boiling, the feeding of orange juice should be instituted by the third week. Beginning with five drops daily the amount should be gradually increased to one or two tablespoonfuls, twice daily, by this end of the eighth week.

Cod liver oil, as an antirachitic, should be started by the end of the third week, beginning with two drops daily, and increasing to sixty drops daily by the eighth week. It is best divided in two feedings. Halibut liver oil and viosterol or the newer fish oil concentrates can be used, starting with two drops daily and increasing to 10 to 15 drops daily by the eighth week.

To meet the iron requirements of these

infants raw egg yolk is added to the diet of both breast and artificially fed infants in the amount of one yolk to each quart of milk. One grain (0.06 gm.) daily of carbonate of iron or iron and ammonium citrate may be used. Liver in combination with iron is a good preparation. Each level teaspoonful of the Lilly's formula contains approximately 3.75 gm. (58 grains) of liver fraction, and 0.65 gm. (10 grains) of ferrous ammonium citrate. The initial amount should be ¼ gm. (4 grains) daily, and increased up to 4 gm. (1 dram) daily in older infants. Either the egg yolk, iron, or liver preparations should be introduced into the diet by the fourth week.

As early as the third week our infants are exposed to ultraviolet rays by use of a quartz lamp. The time of exposure varies with the indications in the individual case. At first these exposures should be limited to 15 seconds, and it is rarely necessary to give more than two-minute exposures three times a week. Over-exposure may result in irritability, vomiting, and increased body temperature. The exposure also varies with the amount of cod liver oil or other antirachitic oils prescribed.

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* * *

The Injection Treatment of Hernia

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OVER a hundred years ago physicians were using chemical irritants for the purpose of producing a proliferation of new connective tissue in the inguinal canal to obliterate it in the treatment of hernia. Velpeau[1] of Paris is the first physician to be given credit for treating hernia by the injection method. He was soon followed by Pancost[2], Heaton[3], Janney[4], Warren[5], and others who treated hernia successfully in a similar manner. With the advent of asepsis in surgery and anesthesia, surgeons became enthusiastic about the operative repair of hernia and soon there appeared a number of operations for the surgical correction of hernia. However, in view of the comparatively high incidence of recurrence of hernia still to be found following the usual surgical operations for hernia [6], [7], [8], and for economic reasons, in recent years widespread interest has been re-aroused over the injection or ambulatory treatment.

Many scientific investigations and histopathologic studies by Harris[9], McMillan[10], Rice[11], Bratrud[12], McKinney[13], and others have served to demonstrate the rationale of this method. It has been shown that within a few hours after the injection of the solution there is a marked polymorphonuclear leucocyte response and some edema in the injected area. This is of short duration, however, and in one week young fibroblasts have appeared; in about eight weeks conversion into mature connective tissue has occurred. This fibrosis causes the muscle layers of the inguinal region to adhere firmly to one another and prevents the descent of abdominal contents into the sac of the hernia. I am of the opinion that the sac, also, in many instances is obliterated as a result of the reaction following the injection of fluid into the sac as well as around it. Quoting Harris and White [14], "If then by any means we can prevent the external oblique from separating from the subjacent muscles the hernia will never descend despite the existence of a sac. This is exactly the result attained by the injection into this region of a solution which produces fibrosis. Such fibrosis obliterates the patency of the inguinal canal by producing an intimate adherence of the muscle layers in this region in a manner almost identical to that accomplished by the suturing of the surgical procedure."

Indications and Contraindications

Any reducible hernia which can be maintained in complete reduction in an ambulatory patient by a properly fitting truss, during the course of injections, may be treated by the injection method. The hernia may be indirect or direct inguinal, femoral, umbilical, or incisional (Figure 1). Patients of any age may be treated by this method provided the above requisites are complied with. Some operators have treated patients as young as two years of age but inasmuch as absolute cooperation on the part of the patient is essential, best results are obtained in adults. Many patients with constitutional diseases or certain infections as diabetes, nephritis, tuberculosis, malignancy, and syphilis may be subjected to the injection treatment whereas they may be poor risks when

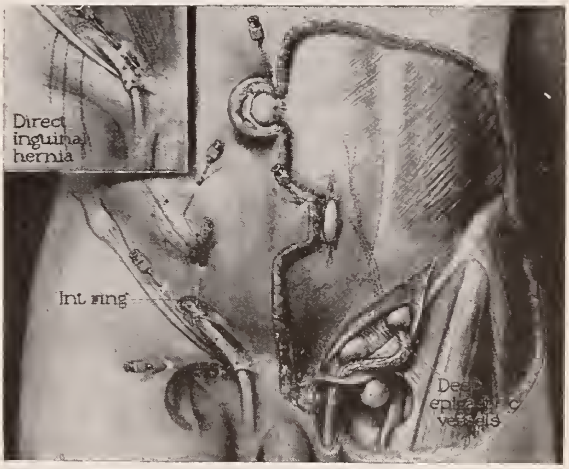

Fig. 1. The several types of hernia most commonly seen.

subjected to surgery. However, in these patients the rate of proliferation of fibrous tissue is more slow and more injections are required. Marked obesity is a contraindication because of the difficulty of maintaining the hernia in reduction. In those with a chronic cough, chronic constipation, urethral stricture, or prostatic hypertrophy where there is a likelihood of increased abdominal tension due to coughing or straining, the bulging of the hernia in such cases is sufficient to prevent repair.

THE SOLUTION

The solutions used by the early workers included tincture of iodine, tincture of cantharides, alcohol and phenol. Many untoward reactions such as sloughing, necrosis, fecal fistula and peritonitis were encountered. These solutions, being strong chemical irritants, produce violent inflammatory reactions. Naturally, such solutions met with disfavor. Present day solutions are entirely different; they cause more proliferation and fibrosis and less of the exudative reaction as was seen in the use of the earlier solutions. A suitable solution must be relatively non-toxic; that is, it should not produce destruction or necrosis in the tissue into which it is injected and if accidentally injected into a blood vessel no systematic reaction should occur, or if accidentally injected into the peritoneal cavity it should not cause peritonitis.

At the present two types of solutions meeting these requirements are available through commercial sources. (1) Sodium psylliate—a sodium salt of the fatty acids (a soap) obtained from psyllium seed. This preparation is non-toxic and if accidentally injected intraperitoneally does not produce a peritonitis. Patients do not complain of pain following injection of this solution. (2) Tannic acid .5% in 80% alcohol with thymol and benzyl alcohol added. Both of these solutions are good; either of them will produce a marked fibroblastic proliferation and a minimum of the exudative type of response.

There are other solutions used for the injection of hernia but with which the author has no experience. They include McDonald's solution (a phenol, alcohol, Thuja solution). LaRochelle's solution (a zinc sulphate, phenol, glucose and quinine urea hydrochloride solution), Pina-Mestre's solution, and Galtanol. Some of these solutions are said to produce necrosis.[15]

THE TRUSS

The hernia must be reduced and held in reduction by a suitable well-fitting truss during the entire course of active treatment. The truss must be worn day and night. Trusses of the spring type are found to be very satisfactory.

TECHNIQUE

The patient is placed on his back on the table; some operators prefer the Trendelenberg position in order to facilitate complete reduction of the hernia. It is imperative that the hernia be reduced before the injection is given. Inasmuch as inguinal hernia is the type most frequently encountered the technique for both varieties of inguinal hernia is given. It is well to cut the hairs of the inguinal region closely by means of sharp scissors; then the skin in the area to be injected is painted with tincture of iodine and the iodine removed with alcohol prior to the injection.

Usually from eight to twenty injections are required the number varying with the size of the hernia and the response of the tissue to the irritant. They are given at intervals of about five days. In treating an indirect inguinal hernia the first three or four injections are to be placed along the inguinal canal and finally a few in Hesselbach's triangle. If we are dealing with a direct hernia, the first injections are placed in Hesselbach's triangle deep in the plane of the transversalis facia, then a few injections are given about the ex-

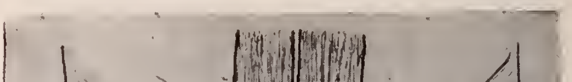
Direct Inguinal Hernia - Injections given:
① about external ring.
② Hesselbach's triangle
③ Internal Ring.
Numerals indicate order of injection
Indirect Inguinal Hernia - Injections started about the internal ring

Fig. 2. Distribution of injections in direct and indirect inguinal hernia.

ternal ring and later injections are placed around the internal ring. A few more injections are required to close a direct hernia than an indirect hernia. Figure 2 illustrates the distribution of injections in each of these types.

In locating the internal ring one selects a point one centimeter above the mid-point of a line between the anterior superior spine of ilium and the pubic tubercle. To place an injection in this region, one may inject the needle perpendicular to the abdominal wall over the internal ring, piercing the skin and fascia; then penetrating the fascia of the internal oblique a characteristic "give" sensation is felt. On introducing the needle just a little further the point is in the region of the internal ring and the barrel of the syringe may be rotated in a circle with ease and without pain to the patient (Figure 3). Another test to determine whether or not the needle point is beneath the fascia of the external oblique is to lower the barrel of the syringe and raise the needle point at the same time—using the tissues as a fulcrum (Figure 4). If the needle has passed through the external oblique the point cannot be palpated. Another and perhaps safer method of injecting in the region of the internal ring (as well as in other regions) is to select a point on the abdomen above the level of the internal ring and insert the needle through the tissues at an angle of 45 degrees with the abdomen and pointed toward the anus. With the needle so slanted one will not penetrate the peritoneal cavity accidentally (Figure 5). The same "give" will be felt on piercing the external oblique as described above. A point higher on the abdomen than the level of the site intended for injection is selected so that by the time the slanted needle has pierced the abdominal wall the point will be at the internal ring.

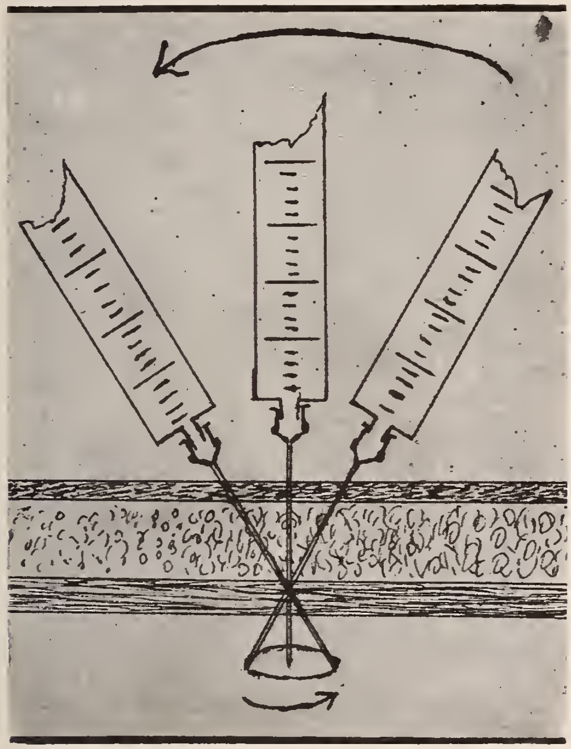

Fig. 3. The syringe may be rotated in a circle when the point of the needle is in the region of the internal ring.

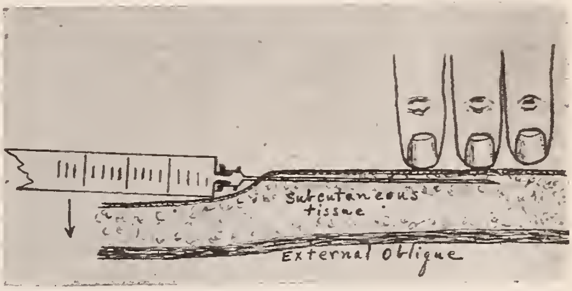

Fig. 4. The needle can be palpated in the subcutaneous tissue when it is superficial to the external oblique; after penetrating the external oblique the needle cannot be palpated.

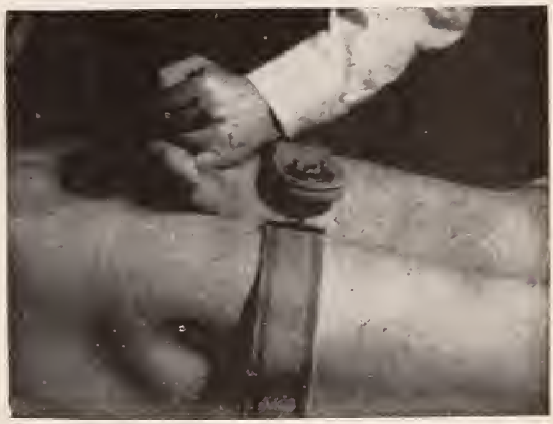

Fig. 5. The needle may be introduced at an angle of about 45 degrees; a finger in the external ring serves as a guide.

In placing injections in the inguinal canal and about the external ring the needle is inserted in the same manner, at an angle of 45 degrees with the abdomen, but the index finger of the other hand is placed in the external ring by means of invaginating the scrotum and is used to guide the operation in determining the location of the tip of the needle.

Results

While my experience in treating hernia by this method extends over a relatively short time, thus far I have obtained satisfactory results in handling all the varieties of hernia commonly encountered; these include direct and indirect inguinal and femoral hernia.

In order that one may gain a better idea of the results obtained in general, the following reports are quoted:

Meyer[16] in reporting his experience during thirty years in treating more than 2100 patients has this to say, "ninety-eight per cent of the patients were proved by follow up to be permanently relieved" and "my files contain records of more than two hundred cases in which the hernia returned after a radical operation but subsequent treatment with the subcutaneous method brought about complete relief."

Fowler[17] reported treating 700 cases by this method with practically invariable success.

Harris and White[18] have reported 225 cases with satisfactory results.

Bratrud[19] reported a series of 107 hernia and concluded that "injection is a safe and effective method of eradicating certain types of hernia, if proper technique is used, but there is danger of complications if details are not adhered to."

Rice[20] in a series of 1025 cases obtained a cure in 97.6 per cent of the controllable cases.

CONCLUSION

From the work of others and from my own experience, I am convinced that the injection technique for the treatment of hernia is a safe, effective, convenient, and economical method.

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Our Public Health Program*

E. A. MAGIERA, M. D.
WHITFIELD, MISS.

THE PUBLIC HEALTH PROGRAM in Mississippi today is a tribute to the outstanding work of our splendid leader, Dr. Underwood, and the far-reaching vision of his predecessor, Dr. Leathers. Even though they, and all of us, hope for broader expansion in the future, it must be indeed gratifying to them to see some of their dreams becoming a reality.

To the Commonwealth Fund and to the Metropolitan Life Insurance Company, we owe much for the aid given in dispelling the appalling ignorance that existed even a few years ago, and in preventive measures that are being carried forward. To their able emissaries, Miss Williamson and Dr. Lamsden, we express our sincere gratitude.

The Public Health Service—through the State Board of Health—has many accomplishments to its credit, and a well-planned program for the immediate future. Prevention instead of cure has become the accepted and familiar axiom in the consideration of many diseases. I wish the same could be said of mental illness. In this field little has been done, and the need is so vital.

Mississippi is fortunate in having at the head of its State Hospital a man who ranks as a crusader and pioneer, along with Dorothea Lynde Dix, Dr. Adolf Meyer, and others in the more modern field of psychiatry and institutional operation—a man whose infectious enthusiasm in his work and evident sincere purpose to serve humanity, has made our hospital one of the best of its kind in the country Dr. C. D. Mitchell has done and is doing a marvelous job. During the twenty years, he has untiringly devoted himself to the upbuilding of the institution and he has wrought miraculous changes. He has delivered the patients committed to his care from iron cages where they were chained, from gloomy, bare and barred rooms in which they were confined, sometimes with mechanical restraint, to a haven where the buildings are clean, safe, and well-cared for, the surroundings beautiful, and the treatment scientific and humane; where frayed nerves and tormented minds find rest, quiet, and kindly understanding care. Truly Dr. Mitchell is doing a wonderful work but on the meager appropriation received it is impossible to expand this work to include mental clinics, which are so needed, and which he has long cherished the hope of establishing. The treatment and cure of mental illness, and the care of those who unfortunately cannot be helped are all that come within the scope of work done by the State Hospital staff. In our work every day we see the definite need of prevention of mental illness—such as could be done in mental clinics. We get patients, in practically every case, as a last resort, for strange as it may seem in an enlightened age, there is still prevalent a feeling of disgrace when a family has a member mentally ill.

Just as syphilis was, until recently, a taboo subject, so is mental illness spoken of in whispers or ignored entirely. This attitude is a hold-over from the past, and the subject has yet to be brought out into the open and frankly discussed. Education is needed, education of the type to stimulate constructive action. While the prevention of mental illness is far behind that of other diseases, we are hopeful, because whenever the public is aroused to action, the way is usually provided. The preventive measures taken in public health work in stamping out disease leads us to the hope that the day is not far distant when the need of mental clinics will be recognized—and what is more— something will be done about it.

We have come a long way, it is true, from the days of witchcraft. The mentaly ill are not thought to be possessed of a devil, nor are they thrown in prisons, or bound in chains. I would like briefly to review the progress that has been made—much of it in recent years.

Dorothea Lynde Dix, who is acknowledged to have been one of the greatest women America has produced, did more to deliver mentally sick from prison walls and place them in state institutions than any other one person. For forty years, from 1841, when she visited a Boston prison and saw the horrible conditions existing there, where insane persons lay huddled in unheated cells, the cold piercing them like knives, until she retired from active work in 1881, she was directly responsible for the founding or enlarging of more than thirty mental hospitals. This timed, retired New England school teacher became a fiery, world-famous standard bearer in an unique cause. She went throughout the land spreading the gospel of humane treatment for the mentally ill. The long crusade is without parallel in American annals. What a record she could point back to at the end of her long career! Twenty states responded directly to her appeals by establishing or enlarging mental hospitals. She came to Mississippi and made a survey, reporting to the legislature of 1850 that she had found in the state 189 epileptics, feeble-minded, and insane persons, who were in jails or without care of any kind. Following this survey, the legislature made the appropriation for our first State Hospital. It was completed and opened for patients in 1856.

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*Read before the Mississippi Public Health Association at Jackson, Miss., December 10, 1939.

She had played an important role in the founding of the Government Hospital at Washington, now known as St. Elizabeth's. Miss Dix drafted the bill organizing the hospital, and also obtained its present beautiful location.

In this connection, we may mention the little realized, but vastly important role of Miss Dix in the development of psychiatric training in this country. The many institutions created through her efforts later became valuable training schools for specialists in mental disease.

Miss Dix was more than an unique personality, however, she was a symbol of an epoch —one of moral reform. Having established institutions for the mentally ill there seemed to be a feeling that no matter how poorly equipped they might be for curative treatment, any institution was expected to restore the sick mind simply by enveloping that mind within its walls. That attitude was a throw-back to the ancient Greek and Egyptian "healing temples." The prevailing approach to the therapeutic problems of mental illness was a simple one. All the insane, or nearly all, could be cured in institutions; even among the most eminent practitioners in the field of mental diseases, this doctrine was given credence.

It is not surprising therefore that the main emphasis in treating the mentally ill during this period was placed on mechanics of institution arrangements. The problems of organization, administration and methods of therapy were considered to be relatively of small consequence in mental hospitals. The important thing was to build them. Medical care in mental hospitals advanced slowly. The first superintendents were not even medical men, but in the mid-nineteenth century "medical superintendents" took over the institutions, but with few exceptions, most of them were not so much psychiatric specialists as physicians with executive and business ability.

Tracing the history of the institutions, the methods of treatment, the design of buildings, and the many important rules set up by the various states, from their establishment down to the present day makes an interesting study. This history follows the trend in social and economic life, showing that as time advanced, and modern methods were adopted in other medical fields, more thought was given to the special requirements of the mentally ill. Throughout the evolvement of the present humane and scientific treatment and care of the mentally ill there has been evident a hesitancy in adopting the new. Modern methods were discovered and adopted in other branches of medicine more readily than those in psychiatric circles. The question of restraint and non-restraint of patients was argued pro and con by the superintendents of these institutions, and as I have already stated, the mechanical restraint in most institutions was only recently abolished. In some of the institutions physical force of the attendant was regarded as the only alternative to mechanical restraint. This of course defeated the very purpose for which any restraint is intended. The agitated patient became more agitated under force, and certainly less quiet with restraint of any kind. Today the humane indeed are the hydro-therapy methods of soothing nerves and bringing rest when patients are in need of it. Not only are the treatments recognized as of physical and mental benefit, but when scientifically applied by kindly, understanding and sympathetic attendants these treatments do not destroy self-respect or cause resentment in the patient.

The rejection of mechanical restraint included also the intangible, that might well be called "moral" treatment. It meant nothing less than the complete humanizing of the institution in its entirety. It required kindness, patience, understanding, and truthfulness on the part of the hospital staff. It required the careful inculcation and development of confidence, trust, self-respect and hope in the patients as far as possible. It required the elimination of heavy-walled, narrow "airing courts" and other prison-like aspects that cast oppressive shadows over many institutions, causing some patients to feel that they were being punished for misdeeds rather than being treated for ailments. It required the planning of healthful recreations and congenial occupation to draw the ill mind from morbid fancies and help to build up a sound body to house a sound mind.

In this radical change it was natural that the housing arrangement also had to be given consideration, and instead of large wards in large buildings, the cottage system of hospital arrangement was designed, and has been accepted as ideal. This system is based on the grouping of smaller buildings around a general administration and receiving building. This ideal arrangement is fortunately the one adopted for the new State Hospital at Whitfield. It is accepted in theory as best by all state institution heads, but unfortunately it has not been adopted by all states because of the failure of legislatures to appropriate sufficient funds, and the general unwillingness to abandon outworn buildings.

During all the radical changes mentioned, psychiatry was also "growing up." It is significant to note as evidence of its long isolation, that only a score of years ago one of its most prominent members, Thomas W. Salmon, referred to psychiatry as "the Cinderella of medicine." So long had the public at large, as well as the general practitioners of medicine, thought of healers of mental disorders in terms of priests, mystics and wonder workers, that only with the greatest difficulty did it receive recognition as a scientific specialty.

Political, economic and reform movements rose rapidly to prominence in the early 1900's. In the field of social welfare, particularly, there was a striving for new goals. There was a growing conviction that radical measures were needed in dealing with the major social ills, namely: poverty, delinquency, and disease. The vicious cycle created as poverty bred both disease and delinquency, and disease in turn bred more poverty. To break this cycle, it became evident that emphasis must not be placed so much on therapeutics, not on patching-up but on the drastic application of preventive measures. Prevention became the key-note in social work and in public health work as the new century opened.

Development in the field of public health undoubtedly exerted a decided influence on the growth of the preventive ideal. The epochal discoveries of Pasteur, Koch and other pioneer microbe hunters, had, in a remarkably short time, made possible the prevention of diseases that had been taking huge annual tolls in human life. Through application of sanitation and hygiene, dread scourges like bubonic plague and typhus all but disappeared from the face of the western world. The dramatic conquest of yellow fever by Walter Reed and his associates at the turn of the century was an important factor in making America health-conscious. If the practical abolition of a number of men's greatest plagues had been so quickly followed upon the discovery of their causes, why couldn't the field of exploration and prevention be extended to other diseases? On many fronts the fight against disease was intensified. Fielding H. Garrison in his "History of Medicine" refers to this period as the "beginning of organized preventive medicine." This period produced such organizations as the National Tuberculosis Association (established 1904 as the National Association for the Study and Prevention of Tuberculosis); the American Social Hygiene Association (which grew out of the American Federation for Sex Hygiene organized in 1910); the American Child Health Association (organized in 1909 as the American Association for the Study and Prevention of Infant Mortality); and the National Committee for Mental Hygiene, formerly organized in 1909. The Mental Hygiene movement was founded by Clifford W. Beers, himself for four years a patient in mental hospitals. His experience and the brutal treatment he and his fellow patients received, as well as his belief that mental illness is not only curable, but preventable, were set forth in his book, "A Mind That Found Itself,'" published in 1908. Following his recovery several reputable psychiatrists had told him his break-down could have been prevented if his condition had been brought to the attention of a competent specialist in its early stages. Added to this personal element was the influence exerted on him by the prominence being given to the subject of prevention in public health and social service—which I have already mentioned.

In his book, which has been called by critics "a classic in American autobiography," he also outlined a plan for the organization of a national society for furthering reforms in the care and treatment of mental illness; for disseminating information to create a more humane and intelligent attitude toward this type of sufferer; for research into causes, nature and treatment; and finally, for the creation of services directed toward prevention of mental illness. The organization plan, as so clearly set forth, soon took form, but the committee is now international in scope. The establishment of child guidance clinics, outpatient clinics, and community clinics are directly attributable to this organization, to say nothing of the changed attitude of the public in consideration of mental illness, for which it is dircetly responsible, through its educational program.

But with all our reforms and improvements, we are still faced with the enormity of mental illness in present-day society. We have come all the way from manacles to mental hygiene, but we have today more than 500,000 patients in the 506 mental hospitals in this country. There are 85,000 patients discharged every year, but there are 109,000 patients admitted. It costs 750 million dollars to care for the mentally ill in this country. Two hundred million of this amount comes from public funds.

To what extent is the control of mental disease possible? It has been estimated that at least 40 per cent could be prevented if we utilized to a maximum degree all the knowledge already at hand. In so far as organic psychoses are concerned much is already being done—in syphilis, pellagra, and like diseases.

Mississippi has today more than 4,100 patients in our two mental hospitals. At Whitfield alone 1,800 patients were admitted last year. 1,300 patients were discharged. This shows in a striking manner the results of modern methods and treatment being used, as contrasted with those available 20 years ago. A recently uncovered record is interesting: From June 1921 to June 1922 there were 2408 patients at Mississippi State Hospital, 155 patients were discharged, or 6.43 per cent. From June 1937 to June 1938, the number of patients was 3279, with 927 discharged, or 28.38 per cent.

Of the 3300 patients at Whitfield, fully 30 per cent are dementia praecox, a disease of youth, often preventable.

Statistics show that in Mississippi the death rate of tuberculosis has been reduced more than one-half in the past 20 years. This proves that prevention of disease plays a most important role—and truly, the prevention of mental illness should be of paramount interest to everyone of us, but we in Mississippi have no facilities for preventive work in functional psychoses—those without physical causes, but attributed to social environment, economic welfare, or maladjustment. The more advanced states have developed extensive systems of mental clinics. Some of these clinics are operated directly by the state mental hygiene department, others by state hospitals within the district each one serves. The operating unit of these clinics usually consists of a psychiatrist, a psychologist, and one or more social workers. They may be set up in the community in general hospitals, health centers, social agenices, and the like. Clinics have been made a part of the educational system in several states. In a number of states traveling clinics have been organized usually with the state hospital as a center. In Massachusetts, for instance, these traveling clinics serve the state school system, under the general supervision of the State Department of Mental Diseases. In New York state clinics are conducted by both the State Hospitals and by the State Department of Mental Hygiene.

At the present rate of admission to mental hospitals in this country, it has been estimated that one out of every twenty children of school age will at some time in his life become a patient in a mental hospital for a period averaging three years. There are today 843,250 school-age children in Mississippi—ages 6 to 20 inclusive—so if the percentage holds good there are now 42, 162 potential mental patients, unless some drastic prevention is put to use in their behalf.

So, WHY MENTAL CLINICS? It would seem such a simple answer that "he who runs may read" it clearly. Forgetting the human suffering, misery, which cost is beyond estimating, forgetting the broken lives, the shattered homes, occasioned by mental affliction, and considering only the economy of prevention, it becomes essential and expedient. The care of the mentally ill is definitely an obligation of the State. Even at the present rate of increase it will be only a question of a few years befor another state hospital equal in size to

Whitfield, will have to be built. That means five million dollars for building and equipment to say nothing of staffing and operating costs.

In this connection I cannot refrain from saying that the present appropriation for the institution at Whitfield is totally inadequate, and but for the strictest economy practiced and the practical production engaged in, the proper care of patients would be impossible. About 39 cents per person per day is what is allowed for everything—medicine, hospital care, doctors and nurses, salaries, food, clothing for many, in fact ,everything is included. It is the cheapest rate for any similar institution in the United States (New York Hospitals have an average of from one dollar to two dollars per day per patient).

You can understand why I stated in the beginning that Dr. Mitchell and his staff cannot attempt clinical work under present conditions. Clinics would keep a lot of people from ever entering the hospital, and if in addition to clinics we could have at the State Hospital a psychopathic ward, or cottage, where those who have not crossed the border-line could be treated without actual admission to the hospital proper, it would mean much.

There should also be more work done in parole follow--up as a part of the mental health program for Mississippi, to aid in adjustment of patients when they are returned to their homes—during the convalescent period, so to speak.

Child guidance and mental clinics would be an altruistic economy, and should have the consideration of every citizen of the state. The public can be made to understand that mental illness is as amenable to prevention and treatment as any other disease of the human body. Whatever plan is worked out for the benefit of the greatest number will be an investment rather than an expenditure —an investment in happiness and health that would prove profitable in a monetary way, within a short time.

The Public Health Association membership can be of untold assistance in bringing the need for mental clinics to the attention of the people of the state. This clinical work should be a part of the Board of Health program, just as it should be a part of our work at Whitfield, and the only thing lacking to make it possible is adequate funds. Sympathetic understanding of the urgent need for child guidance and mental clinics on the part of the citizenship, we believe, is the first step toward obtaining them. Legislatures will usually do what the greatest number of taxpayers demand. Let us who do understand this vital need join together in making our answer heard and heeded— and tell the citizenship of Mississippi, in no uncertain terms, *why mental clinics*. I thank you.

Pneumonia*

A. E. BOSTICK, M.D.
IUKA, MISS.

PNEUMONIA is a very dangerous and widespread infectious disease, which is found mostly in the temperate zones. It occurs very rarely in the tropics. In about 90% of the cases of lobar pneumonia, the disease is caused by the diplococcus pneumoniae, of which more than 30 types have been found. About 32% of all lobar pneumonia are caused by Type I, and most of the remainder are caused by types II, III and IV.

The old belief that everyone carried pneumonia germs in the mouth and that most cases were caused by these harbored germs, has been changed and is not now regarded as the cause. But, now, investigators are agreed that pneumonia is infectious, and that it is caused by getting the germs from some other person who has the disease, or by people who have been "carriers" of diplococcus pneumoniae.

Lobar pneumonia is usually ushered in by a chill, more often in the night, with stabbing pain in the chest at site of affected part, expectoration of rusty sputum, high temperature, and in many cases, vomiting. Yet we find many atypical cases. Pain may be almost absent at site of infection; but, often the pain is referred to some other part of the chest or abdomen. Delirium and cyanosis are symptoms which are found in many cases.

In the past the mortality has run very high—ranging from 15% to 25% in private practice, and from 25% to 45% in hospitals. In the most of cases the symptoms last from 5 to 12 days. The symptoms vary. Very mild to very severe, depending to some extent on location and the number of lobes involved.

We submit here three recent cases:

Case No. 1: Negro woman, married, age 26, wt. 165 lbs. Had been in good health. Saturday, Feb. 26, 1938, had prolonged chill, accompanied by severe stabbing pain in left side, with constant cough. I saw her 6 hours after chill. Pulse 95, respiration 26, much pain. Temperature 104°F. Coughing and raising some rusty sputum. She grunted with each respiration. She had some delirium.

Treatment: ¼ gr. morphine under skin with needle. 4 c. c. of a lysinogen into gluteal muscle. This was at 9 p. m. Saw her next morning at 8 a. m. Repeated the lysinogen. Repeated again with 2 c. c. at 8 p. m. And next day with 2 c.c. each at 8 a. m. and 8 p. m. and I gave 3 c. c. again on the next day. Her temperature was normal 86 hours after first symptoms and remained so, except for about 3 hours on the fifth day. Other treatment: Much fluid by mouth. 20 gr. soda citrate dissolved in water every 4 hours per orem. Recovery now complete.

Case No. 2: Male, age 32, married, auto mechanic, had just recovered from an attack of measles. Worked one day. Had had chill at midnight. I saw him at 4 a. m., March 8, 1938. Symptoms were very similar to the case just mentioned. Pain was in left side, involving lower lobe. Treatment, very much the same as in case No. 1. I started with 4 c. c. of the lysinogen in gluteal muscle, twice first day. 3 c. c. twice second day. Temperature remained normal after 70 hours. He continued to raise some rusty sputum until 96 hours had passed. He is still weak at this time, but is convalescing nicely.

Case No. 3: Female, married, age 62, wt. 170 lbs. She did some seed planting in her garden and got wet last Tuesday. Felt bad Wednesday, March 9, 1938. Had hard, prolonged, chill at 1 a. m. Thursday, which lasted several hours. I saw her at 7 a. m. She was suffering much in upper right side. I gave her morphine gr. ¼ to ease pain, and a phenodyne tablet every 4 hours as needed. Other treatment was fluids, laxative, soda citrate gr. 20 in water every 3 hours. I gave the lysinogen twice daily; beginning with 4 c. c. per dose first day 3 c. c. each dose second day. 2 c. c. third day at each dose. Her temperature remained normal after 80 hours from initial chill. Today, March 15, 10 a. m., she is clear of fever and feeling well, but she still raises a small amount of tenacious stained sputum.

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*Read before the Northeast Mississippi Thirteen-County Medical Society, Pontotoc, Miss., June 17, 1938.

Bronchopneumonia is also a rather common serious affection of children and older people. In treating this disease, we use the same lysinogen with supportive treatment.

This lysinogen is supposed to relieve pneumonias by increasing the fighting force of the body, viz: white blood corpuscles.

Typing and treating pneumonia, with the indicated serum, is now used and with a much higher percentage of recoveries. Yet, without use of the lysinogen—towit: Edwenil in a series of 108 cases, we have had less than 3% mortality. Since the claim for edwenil that, when given intramuscularly, it increases the phagocytosis of the body. I decided yesterday, March fourteenth, to make a personal test. At 8 o'clock p. m. I had some blood taken to make total W. B. C. I immediately shot 4 cc. of edwenil into gluteal muscle. Count was made. Total W. B. C. 6775. At 1 o'clock this morning I had second count—5 hours after receiving edwenil—which was 9350—an increase of 2775. And at 12 o'clock noon today being 16 hours after shot—count was 12,200, or an increase of 5625. And, since the body can be induced to increase its fighting force to almost double, in a person with normal W. B. C. and one who has no infection or septic condition, it should do much more in a person with some infectious pathological condition, when nature itself is doing much to increase the phagocytes. We feel that if by conscription we can nearly double our fighting force, we can do much more with both—(the increase brought about by injection of the edwenil and the natural increase caused by nature in trying to overcome the pathological condition). There is no drug that we can introduce into the body that can kill the invading enemy. But, we have shown that we can introduce a lysinogen that can help nature to put up a stronger fight. Therefore, with this treatment, we have nothing to lose, and much to gain.

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Sulfapyridine in the Treatment of Pneumonia

By HARVEY F. GARRISON, M.D.
JACKSON, MISSISSIPPI

THE following abstracts and comments on the subject of the therapeutic value of sulfapyridine are timely. It is one of our newest therapeutic remedies, and judging from all of the available reports from those who have used it, as well as that of my own experience, it is certainly most valuable in the treatment of the pneumonias. I hope that every doctor in Mississippi may read this abstract. I have used sulfapyridine in a sufficent number of cases to be convinced that it is undoubtedly the most valuable remedy that I have ever used in pneumonia. I can wholeheartedly and enthusiastically commend its use to the profession of our state.

"CLINICAL EXPERIENCE WITH SULFAPYRIDINE"

(Report of thirty-three cases)

by W. A. MacColl, M.D., Durham, N. C.
The JOURNAL OF PEDIATRICS, March, 1939

"The clinical success of sulfapyridine in infections with streptococci, gonococci, and meningococci has stimulated search for new and related chemical compounds of therapeutic value. Of these numerous derivities, sulfapyridine has emerged as a valuable treatment of pneumococcal infections and others have had similar success. Successful therapy has also been reported in the treatment of meningococcal, gonoccocal, staphylococcal, and streptococcal infections.

"The drug, which has been called by various names — sulfanilamide-pyridine, sulfonepyridine by the Council of Pharmacy and Chemistry—is a slightly bitter powder made up in 0.3 and 0.5 gm. tablet and capsules. It is given by mouth in either tablet or suspension, and also has been given intramuscularly in olive oil. It is said to be soluble 1:1,000. Evans and Gaisford recommend the following dosage:

1-3 months	0.8 gm. daily
6-24 months	1.5 gm. daily
3 years	2.0 gm. daily
5 years	3.0 gm. daily

The author treated nine cases of lobar pneumonia. The average number of days of illness before treatment was three. The dosage of sulfapyridine ranged from 1.8 gm. per day to 3.0 gm. per day. The ages of the children treated ranged from nine months to ten years; the average number of days treatment for the nine patients with lobar pneumonia was five days.

The Temperature Response

The temperature ranged from 103 to 106 degrees, before treatment was begun. After treatment was begun, the temperature fell from the highest point to 98.6 and 99 degrees with twenty-four to forty-eight hours. Before treatment, the total white cell count ranged from 11,000 to 20,000. In practically all of the cases, the white cell count fell from the highest point to normal or just slightly above within 24 to 48 hours after treatment was begun.

The organism in three cases was pneumococcus type two; three cases were untypeable, two were not typed at all and one was questionable. The author reported one case of pneumococcal bacteria, with pneumococcus type two, one with nephrosis, one with peritonitis with pneumonoccus type nine and one with mediastinitis with pneumococcus types one and two, all treated with sulfapyridine. Two cases of empyema were also treated with sulfapyridine one of which showed pneumococcus type one; the other one was untypeable. All of these cases showed hemolytic streptococcus; five showed stapholoccus aureus and one with streptococcuss viridans and staphylococcus albus; the organism in one case was questionable. The author also reported three cases of meningitis, two with ruptured appendix, three cases of osteomyelitis, all of which were treated with sulfapyridine.

"The most successful results were obtained in thirteen pneumococcal infections. All of the patients showed marked improvement within forty-eight hours. Temperature usually reached normal in twenty-four to forty-eight hours with an average of thirty-six hours. The true crisis of lobar pneumonia was not seen but, rather a rapid lysis. In general the course of the pneumonia patient was one of marked improvement during the first day with relief of toxicity, malaise and some fell in temperature. During the second day, the appetite improved, headache and other symptoms disappeared, the white blood cell count fell, and the hemogram improved. Resolution usually began with the fall in temperature."

Dosage and Toxicity

Determination of dosage was influenced by weight, age, and degree of illness of patient. Further experience probably will demonstrate how much of the drug is necessary by age or weight, for the best results. The concentration in the blood has been determined by Marshall's method for sulfanilamide, using sulfapyridine as a standard. The values obtained ranged from 0.2 mg. to 9.4 mg. per cent. The number of cases treated is too small to be conclusive, but the results indicate that concentrations of approximately 2 mg. per cent is sufficient."

This and other reports including the experience of your writer indicate that this drug shows about one-fourth the toxicity of sulfanilamide. All of those who have used sulfapyridine recommend that the same precaution be used as when administering sulfanilamide. Nausea was noted in about 28% of the cases; cyanosis in only about 10% of the cases. The author's discussion is summed up as follows:

"Sulfapyridine, a new chemotherapeutic agent, has been used in the treatment of thirty-three children suffering from a variety of diseases. The results were presented with comments.

"The most effective use of the drug in this series seems to be in pneumococcal infections. Improvement was noted within forty-eight hours. The total white count seems to be the best indicator of progress, since a delay in resolution and spread of the process appear to occur when the count remains high. This suggests that specific antiserum may be of value when the patient's antibody response is low.

"In bronchopneumonia the drug seems promising and has been of benefit in cases in which other treatments failed. The infections treated were caused by beta hemolytic streptococcus and hemolytic staphylococcus aureus.

"The case of administration and the effectiveness of the drug represent a saving of time and a notable therapeutic advance in the treatment of pneumonia.

"A miscellaneous group of conditions treated suggests that the drug may have a wider application and deserves further study.

"Toxic effects such as vomiting, cyanosis, mathemoglobin formation, and a fall of hemoglobin during treatment have been noted and indicate that the same caution must be employed as with the use of sulfanilamide.

"The drug is effective in smaller doses and in lower concentrations than sulfanilamide.

"In almost all cases the administration of the drug has been accompanied by a lowering of the temperature. This has been so constant that an antipyretic effect is suggested."

COMMENT

The writer has used sulfapyridine in the treatment of twelve cases of pneumonia. One of these was a four-year-old girl with a bilateral broncho-pneumonia, involving practically the whole of both lungs. The child had been ill for about six days when I first saw her. She was practically moribund, her feet and extremities were cyanosed; temperature 104, pulse 180, respiration 60; x-ray of chest revealed both lungs practically wholly envolved; I had little hope for her to live and so told the parents. We took her to the hospital, put her in an oxygen tent, gave her a small blood transfusion, and the administration of sulfapyridine was begun at once. One tablet of 7.7 grains or 0.5 grams was given every four hours for the first eight hours for the next twenty-four hours, after which time it was discontinued. The patient showed marked signs of general improvement within twenty-four hours. The blood count and temperature came down rapidly. She continued to improve and was sent home from the hospital practically well in eight days from the time she entered the hospital. Since the time we have had ten cases of lobar pneumonia and two cases of bronchopneumonia. All were treated with sulfapyridine in a similar manner to the management of the above case with most gratifying results. I consider that the discovery of this therapeutic remedy is undoubtedly one of the greatest achievements of scientific medicine in many years. The results that we have obtained have been simply marvelous, and in several instances quite spectacular. Pneumonia, in most cases, is apparently conquered within twenty-four to forty-eight hours after treatment with sulfapyridine is begun, and the patient is immediately on the road to recovery. Our own experience with its use in pneumonia is practically the same as others who have had any experience in its use.

Allow me to urge that the drug be used with the same precautions as when using sulfanilamide, however sulfapyridine is much less toxic than sulfanilamide. We are bold to suggest that the general mortality rate in pneumonias may be cut at least ninety per cent by the use of sulfapyridine.

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Mental Health During Childhood

HUNTER L. SCALES, JR., M.D.
STARKVILLE, MISS.

THE knowledge of childhood behavior problems has reached such a point that it should now be placed in the hands of the general practitioner . . . the man that sees the child before the behavior problem develops. Under the leadership of pediatricians and mental hygienists, this field has become known as that of mental health. In view of the fact that over half of all the available hospital beds in the United States are given over to mental illnesses, we can easily appreciate the value and importance of the part that you can play in this program.

Mental health may be defined as the whole integration of the person—the body, the mind, and the environment. Most of you will admit that the old adage, "We are all born free and equal" no longer holds true. We come into this world with a certain amount of endowment or what we call inheritance. The remainder of our lives we spend trying to get the things we want and keeping away from the things that we do not like. These are our reactions to our environment. You as doctors have the first opportunity of directing and developing that life and personality. You can and have observed environmental influences which, if let alone, will certainly take abnormal trends. Mental health should share the same importance as does that of physical health and during the early life of a child, mental health becomes a problem of prevention rather than of treatment. If you will take the time to apply a few of the following suggestions, you will have ever grateful patients.

Your contact with the child will be through the parents and the remainder of my talk will be upon your discussions either with the father or mother. I realize that affection and mother love make this a most difficult problem but if you are patient and give a thorough explanation, then each day you will find more patients coming to your office for just such advice.

One of the first and simplest rules for discussion of mental health with your patients is that the child should be treated as if he or she were a living human being—a person, and not a toy or plaything. This particularly applies to the infant. Put yourself in the child's place and say, would I like this to be done to me? You have all seen the mother that jiggles the infant on her lap. You would not like that and yet it is done to the infant that has a much more nervous system than does the adult. Would you stand to be punched in the stomach or tickled in the ribs about fifteen times a day? You most definitely would not. It may be mentioned to the mother that the infant's head grows about four inches during the first year and then the remainder of life grows only four or five inches.

Children, like all human beings, are complex creatures and defy any attempt at simplified reduction of their behavior to any one common denominator. However, we shall now discuss a few specific points that you may pass on to your parent patients.

Habits: Because the child has no bad habits then it is much easier to begin the development of good habits. Regular habits as to eating, sleeping, bowel evacuation, work and play. An infant can be taught the daily regular evacuation of the bowels by beginning at the age of two months. At nine months the control of the bladder may begin. These are physical functions but with them, certainly, mental health is promoted.

Tantrums: The only way the infant may express a desire for discomfort is crying. Teach your mothers to see if the child is too wet, hot, cold, hungry, or ill. Ask the mothers calmly to determine why the child cries—not to be overanxious. It only takes the infant a short time to discover that crying will bring a nice walk by father or mother at any hour of the day or night, a habit in which I can see no necessity. The child should not have the impression that he is the only member of the household. If you do, the infant will soon develop into a cry baby. These are the adults that you see going from job to job—the never-do-wells. After once leaving the parental roof they are still crying, cannot and do not face the realities of the world. Sermons or arguments have little effect upon tantrums. The best treatment is that they be completely ignored. Why not treat the infant as the adult. When a crying, griping, whining individual is encountered he is usually ignored or the individual is avoided. You can aid in preventing his type of indvidual with a little patience and talk with the parent.

Energy: One of the most frequent admonishments that you will hear given to a child is "Be still." Explain that children have excessive energy—their whole being is to do. It cannot be stopped but can be directed or guided. When the child is doing a harmful act, direct the action to his toys, drawing, or handicraft or in older children to books. My former teacher compared the energy of children to that of electricity. It cannot be stopped but certainly can be directed into useful channels.

Responsibility: We all like responsibility and so do children. In later life the adult must assume this trait. Teach the child to place his toys in a certain place when play is over, to remove his clothes from the floor and, in older children, give them definite chores to perform. Depend upon the child He will appreciate it and usually gladly accepts the responsibility

Obedience: We all know children that we dislike to come into our office. If you will investigate your thoughts, you will find that you dislike the child because he does not obey. Do not blame the parents whom you may help. Disobedience in the child is often lawlessness in the adult. Ask the parent to be reasonable with the child. Explain that "don't" should be used only when the patient becomes destructive to property or dangerous to another person. You all remember people in your childhood that "made you mind" and even today you perhaps respect those people just a little more. Remember that the child also has some rights. If Johnny is sitting in his sand pile, quietly and calmly playing, when he is jerked out by a doting mother into a circle of giggling neighbors and told to "say what you said to Daddy last night," would you do it? Certainly not.

Obedience quite often must be taught by physical punishment We will perhaps never get so modern that we can do without it as it is the only method that will make a lasting and definite impression on the young mind. If Johnny comes to the table and pulls at an expensive vase, you say: "Do not do that because you will break the vase." He repeats the performance. Again warn him. On the third time a good sharp rap on the wrist will quickly teach Johnny to obey. But again plead with the parent to be reasonable with punishment; it is much better than to lose the respect of your child.

Fear: We are not born with fear and to teach a certain amount of fear of dangerous actions is certainly wholesome. How many of you are even now afraid to talk over the telephone when it is lightening? Why frighten the child about the dark, thunder, policemen, or even about the doctor as so many parents do? Recently I saw a little twelve-year-old girl with a pain in the LRQ, no elevation in temperature, leucocyte count normal. After seeing the child again with the same complaint, I found the following story: The child had been bitten by a rabid dog and been given the Pasteur treatment. Following this the child had three or four attacks of pain a week. Sometimes the pain was in the LRQ, sometimes in the LLQ, sometimes with muscle rigidity. After a mild sedative, patient would feel perfectly well, the morning after attacks. I found that the attacks came on when her brothers were not a home or during the absence of her father and usually occurred when a dog was heard in the neighborhood. Later the child had the appendix removed upon the insistence of her father as he was tiring of the attacks. A few weeks following the operation the attacks returned. Upon a visit away from home the child did not have a single attack. This child has a fear complex—a compulsion neurosis. This kind of case you could have prevented. Often if you will familiarize the patient with the object of his fear, the advanced state will not be reached as illustrated in the case above.

Courage: Certainly some of us are born with more of it than others. But there is none of us in whom it cannot be developed. We all hear the mother say: "Let me spank that old chair that hurt my baby," or "Let me kiss where it hurts." That will not aid the child in meeting his unpleasantness. Tell him to jump up and try it again. Explain that crying will not help a minor injury. Take it like a man. Start the child out to be a courageous individual.

Reliance: After the first year, it is very difficult to fool a child. When the mother says: "I will take you to see the ducks this afternoon," and then finds a bridge date more pressing, it will not take the child any length of time to become unreliable also. Children are the greatest of mimics. Do not say: "This will not hurt you a bit," and then jab a two-inch needle in the child and then next time you wonder why he cries when he sees your face. Set a good example for the child to follow; thus reliance is taught.

Encouragement: I like encouragement, we all do, even the two-year-old child. But when the child brings a one-line drawing to you and says: "This is a horse," do not say it is a fine horse. Rather, "It is a horse, but don't you think that you can do a little better?" In other words, don't promote the perfect child. You have all seen them. They are reared to be perfect—never did a wrong. These are some of the people that later grow up to break our laws and must be imprisoned. The perfect child tends to be anti-social. You can prevent it by patient advice to the mother.

Confidence: The parent often wonders "How could my son or daughter do this to me?" When four-year-old Johnny comes blundering into the room filled with company to ask a sex question, don't hush him. Tell him the question will be answered later. Children have curiosity and it must be satisfied. Tell the parents that if they do not know the answers to come to you. Why let the child get his sex information from a misinformed classmate or in some back alley? Sex is not dirty unless taught to be such. Satisfy the child's curiosity and you will always retain his confidence.

Now, in closing, you are probably thinking, "Why, that is just common sense he is talking." Certainly it is common sense, but organized common sense. But do you apply it in your practice? To your patients and their children? Why are our mental hospitals and penitentiaries needing more and more room each year? There are over 300 successful child guidance or mental health clinics in the United States with some 60,000 patients a year. All I ask is: apply mental health to your patients because it is just as important as the treatment of the case of diphtheria that you may see next week.

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The Mississippi Doctor

The Journal with a vision, the delivery of modern medicine to the masses at less cost to the individual and more profit to the practitioner. The champion the small hospital, the hub around which this service must be built.

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Published monthly at Booneville, Mississippi

Annual subscription $1.00

Entered as second-class matter, January 19, 1926, at the post-office at Booneville, Miss., under the Act of March 3, 1870.

The meeting of the Northeast Mississippi Thirteen-County Society at Columbus was up to standard in every way—the attendance, the scientific program, and the entertainment. Of course, the new president, Dr. J. W. Lipscomb, presided in fine order. He could have presided over the A. M. A. just as well. Our young doctors are up and coming. Drs. Scales and Green read splendid papers. Our visiting essayist, Dr. Andrew L. Glaze, of Birmingham, gave a most practical discussion on, "A Treatment for Vesicular Ringworm of the Hands and Feet." Dr. Cromer from the A. M. A. was with us and discussed our hospital set-up at the banquet. He seemed to be deeply impressed with our per capita distribution of funds for the indigent sick. We deeply appreciate the nice things he said about our state in this respect. Dr. Cromer impressed us as being a real student and a man who has our medical problems at heart. He can be of great service to us and we hope he will visit us often. It is most delightful to attend a medical meeting at Columbus. The next meeting will be held in Houlka, the home of Dr. W. C. Walker, the official orator of the Woman's Auxiliary who on this date will celebrate his eightieth anniversary.

The per capita distribution of funds for the indigent sick is the great step forward in Mississippi medicine. The unfortunate sick should be able to go to any hospital of his choice and call whatever doctor he wants. Mississippi has as many hospitals as it needs now. There may need to be some different distribution and many of our hospitals could stand a lot of improvement. It would seem that in some of our towns we could combine hospitals to the benefit of all concerned. The hospital should not be used as a leverage to secure cases for any doctor. On the other hand the doctor who is not willing to qualify and who is not willing to contribute something to the building, equipment and maintenance of a hospital in his town or county should not expect special favors from the hospital. Many doctors in Mississippi have put the greater part of their life earnings into hospitals in order that the sick might be treated nearer their homes. They deserve much credit for this.

A trained nurse for every practitioner may be a bit idealistic, but there is no limit to her value to the doctor and to the public if her services are properly utilized. She can make the office more attractive, she can carry education to the patient under the direction of the doctor, help to sell the doctor to the patient, aid in his collections, enable him to make a more thorough examination of each patient and to secure and keep a better history. No modern restaurant would get very far with the cook taking the orders and serving the meals. The trained nurse can be of much help to the practitioner in serving his life-giving measures in attractive and palatable form.

There is a mighty lot being said about the indigent sick, about adequate medical care for them. This is all right, but the man who needs help the worst is not getting much sympathy, much less help. It's the doctor who is giving his very life blood to treat the charity patient. The hospital and the nurse and the druggist get their pay pretty well, but the doctor who gives his time, keeps up his car, buys gasoline, his medicine and supplies, gets not even a little consideration for the wear and tear of his human machine. This is not fair to the doctor nor to the indigent whom he is attempting to treat. Just because the medical profession in the small town and rural community has put forth every effort possible to take care of the unfortunate sick is no reason that it will be able to continue to do so. This may be possible in the cities where some large fees may yet be charged and collected, but the very best fees in the small town are too small to make up for the growing burden of charity being thrown on the country doctor. The doctors who are already in the harness and who have been embued with a vision of service will stick to their guns like Spartan soldiers, but the young doctors are already avoiding the country practice. The hours are too long, too continuous, and the responsibilities too heavy for them to begin to put their shoulders to the wheel. If once they do, many are almost certain to be lured back to the big hospital and the brighter lights and shorter climb to recognition afforded in the city.

You will read with interest and profit the abstract and comment by Dr. Harvey Garrison, Sr., on "Sulfapyridine in the Treatment of Pneumonia." The reports are certainly encouraging. Be sure to read the abstract in the state department of the journal. The Lederle Laboratories are putting out this product. If it is affective in the treatment of pneumonia as many reports now indicate, it will certainly be one of the greatest drugs yet discovered.

As the peak of pneumonia incidence is passing, it might be well to consider our status quo with regard to the modern understanding of this most important medical problem. Pneumonia is, undoubtedly, one of the greatest killers with which we have to contend. More than one hundred thousand deaths, annually, in the United States, are caused by pneumonia. This is more than results from typhoid fever, diphtheria, scarlet fever, erysipelas, meningitis and automobile accidents combined. During the pneumonia season lives are destroyed by this disease more rapidly than they were during the World War by the German forces. Does it not appear that we as doctors and all our people should be immensely and intensely interested in this distressing situation. Is it possible that all of us may have become indifferent and may have come to accept the situation as unimportant because of its general distribution and common occurrence? We rather think that this is true. The traditional idea that what may not be avoided must be accepted with equanimity, no doubt, plays an important part in this indifference. But, we think, it is largely due to the fact that neither the public nor the profession realizes just how large the percentage of fatalities is in this sickness. If we could remember that not less than forty per cent of true pneumonia cases end in death, we surely would arouse from our lethargic indifference. When we state that the death rate is forty per cent, it must be remembered that this rate is based on a number of years and the entire area of our country. In the deep South the rate is not so high as in the East and Rocky Mountain districts. Again we must come to know that, possibly, more than half the cases reported and treated as pneumonia are incorrectly diagnosed — no man, we care not who he is nor how much clinical experience he may have had, can be absolutely sure of his diagnosis without the aid of his microscope. This loose and incorrect diagnosis dilutes the mortality rate and, at the same time, leads doctors to believe that some pet plan of treatment is successful in pneumonia. This is very unfortunate, in fact it is tragic; for prior to 1910-13 no treatment had been devised or discovered that had any effect on the disease or its causative agent. The most and all that could be done was to give the patient good nursing and supportive care. At the time mentioned it was proved that a specific serum could be used that would render the pneumoccus vulnerable to the phagocytic blood cells. This serum, possibly, exercises a neutralizing power upon the toxin that has been turned loose in the blood stream and may slow up the multiplication of the infecting organisms as well. But the real destruction of pneumococci is accomplished by the phagocytic blood cells. These facts seem to be incontrovertible. However, after a quarter of a century we find that less than five per cent of true pneumonia patients are given the benefit of the only worthwhile treatment that had been found. Strange, how very strange! We do not propose to discuss in detail, serum, therapy; for I take it that every competent and progressive doctor knows the details as well as we do. But just as the profession seems to be waking up to the facts and its duty, the most sensational statement is made. If the claims that have been made for sulfanilamide as a specific for pneumonia are substantiated, and there seems to be little room or reason for doubt, the most wonderful medical discovery of all ages has been made. At this time, we will not say much about this angle of this great problem. We will summarize by saying that most cases of lobar pneumonia are caused by types one and two pneumococcal infection. For these types we have specific sera that cut the death rate more than half way. Types three and four (old classification) do not enter into the equation so much since but few cases are due to type three (these nearly all die). Most type four cases recover under nursing care. But if half the deaths can be prevented by the use of sera specific to types one and two, perhaps fifty thousand people die needlessly each year. Now it would seem to appear that sulfanilamide, properly used, is effective in combating all types. It can be used orally and is very cheap when compared with the cost of specific serum. Now comes the claim from England that a London drug concern instructed its chemists to tear sulfanilamide to pieces, much as a boy might tear a house constructed of building blocks, then to proceed to construct other buildings of the same blocks. After six hundred and ninety-two failures a new compound, designated as M. & B. 693, was found to be far more effective than the original sulfanilamide. These claims, supplemented by the claim that Felton's vaccine is a true prophylactic, would lead us to hope that the dread killer is hors-du-combat. Is this too good to be true? Let us hope and pray. At another time we may be tempted to discuss the biochemical processes involved in this question.

G. S. B.

MISSISSIPPI STATE MEDICAL ASSOCIATION — GULFPORT

GENERAL MEETING — FIRST DAY

Tuesday, May 9, 1939

Session 1:30 p. m. to 6:00 p. m.
Roof — Markham Hotel

OPENING EXERCISES

Call to Order, President Joe E. Green, Laurel.

Invocation, Rev. Henry Brookshire, D.D., Gulfport.

SECTION ON HYGIENE AND PUBLIC HEALTH

N. C. Knight, chairman, Meridian

1. Address—Governor Hugh White.
2. The Public Health Aspects of Syphilis Control.—Paul Padgett, Johns Hopkins Hospital, Baltimore.
3. The Public Health Aspects of Pneumonia Control.—Roderick Heffron, New York City.
4. Treatment of Pneumonia.—Oscar W. Bethea, New Orleans.
5. The Value of a Home Delivery Nursing School.—T. Paul Haney, Jr., McComb.

Discussion opened by Thomas Purser, Jr., and A. R. Perry.

SECTION ON EYE, EAR, NOSE AND THROAT

W. Lauch Hughes, chairman, Jackson

Tuesday, May 9, 1939

Session 1:30 p. m. to 6:00 p. m.

Room No. 201 — Mezzanine — Markham Hotel

1. Headache Due to Vitamin B.—J. C. Pegues, Greenwood.
2. Treatment of Convergence Squint.—Grady Clay, Atlanta.
3. Infections of the Face.—Geo. E. Adkins, Jackson.

Discussion opened by C. A. McWilliams and E. LeRoy Wilkins.

4. Dysphonia and Aphonia.—D. E. Staton, Columbus.
5. The Tracheotomy—Its Dangers and Complications.—Carl Granberry, New Orleans.
6. The Use of Foreign Protein in Ophthalmology.—E. W. Green, Hattiesburg.

Discussion opened by B. S. Guyton and V. D. Hagaman.

EVENING SESSION—EIGHT O'CLOCK

Tuesday, May 9, 1939 — Roof of Markham Hotel

— The Public Is Invited —

1. Invocation.—Rev. J. Brown, D.D., Gulfport.
2. Addresses of Welcome:

In behalf of city of Gulfport—Mayor J. W. Milner.

In behalf of Coast Counties Medical Society—F. O. Schmidt, Ocean Springs.

3. Response to Addresses of Welcome.—C. E. Burnham, Bay Springs.
4. In Memoriam—Secretary T. M. Dye.
5. President's Address: "Socialized Medicine from the Viewpoint of a Country Doctor."—Joe E. Green, Laurel.
5. Ewing Fox Howard Oration: "Modern Trend of Obstetrics."—Oren Moore, Charlotte, N. C.

SECTION ON SURGERY

Lawrence W. Long, Chairman, Jackson

Wednesday, May 10, 1939

Session 9:00 a. m. to 12:30 p. m.

Convention Hall — Markham Hotel

1. Chairman's Address: "Sympathetic Surgery for the General Surgeon.
2. The Surgical Significance of Amebiasis.—Alton Ochsner, New Orleans.
3. What Mississippi Is Doing About the Cure of Tuberculosis with Surgery.—Henry Boswell, Sanatorium.
4. The Cautery: A Surgical Necessity.—Sydney W. Johnston, Vicksburg.

Discussion opened by J. P. Culpepper, Jr., and H. R. Shands.

5. The Late Complication of Head Injuries and Their Treatment.—Cobb Pilcher, Nashville.
6. Present Day Obstetrics.—C. L. Simmons, Hazlehurst.

Discussion opened by E. L. Walker and O. G. Eubanks.

7. Modern Concepts in the Treatment of Facial Injuries. — Wm. Milton Adams, Memphis.
8. Carcinoma of Cervix Uteri.—Nathan Kendall, Jackson.

Discussion opened by W. H. Parsons and V. B. Philpot.

SECTION ON MEDICINE

W. H. Anderson, chairman, Booneville

Wednesday, May 10, 1939

Session 2:00 p. m. to 6:00 p. m.

Convention Hall — Markham Hotel

1. Night Blindness and Vitamin Deficiency as Evidenced by the New Biophotometer.—George W. Owen and Robin Harris, Jackson.

Discussion opened by J. C. Adams and Alston Callahan.

2. Syphilis in Its Relation to Insanity in the Mississippi State Hospital During the Last Ten Years.—Willard L. Waldron, Whitfield.

Discussion opened by Lamar Arrington and Van C. Temple.

4. The Diagnosis and Treatment of Coronary Artery Disease. — A. Carlton Ernstene, Cleveland, Ohio.
5. The Problem of Tuberculosis. — W .A. Toomer, Tupelo.

Discussion opened by D. L. Anderson and J. A. Rayburn.

(Continued on Thursday)

SECTION ON MEDICINE

(Continued from Wednesday)

Thursday, May 11, 1939

Session 9:00 a. m. until completed

Convention Hall — Markham Hotel

6. Some Gastro-Intestinal Manifestations of Deficiency Diseases.—Laurence J. Clark, Vicksburg.

Discussion opened by J. H. Green and J. W. D. Dicks.

7. The Relation between Urology and Other Branches of Medicine.—Earl Floyd, Atlanta.
8. Several Procedures in the Management of Cervical Diseases and Injuries.—M. M. Snelling, Gulfport.

Discussion opened by W. F. Hand and Joe P. Evans.

HOUSE OF DELEGATES

COMMITTEE ON ARRANGEMENT AND ENTERTAINMENT FOR THE MISSISSIPPI STATE MEDICAL ASSOCIATION

General Chairman: C. A. McWilliams.

Vice Chairman: E. C. Parker.

Treasurer: H. K. Rouse, Jr.

Entertainment: M. M. Snelling.

Hotel: W. P. Sheely.

Publicity: E. E. Sheely.

Scientific Exhibits: A. C. Hewes.

Fishing: Cummings McCall.

Golf: Joe Evans and B. B. O'Mara.

They are making arrangements for a big meeting. The Coast Counties Medical Society will give a seafood dinner Wednesday evening and a boat ride to Ship Island Thursday afternoon in addition to the usual entertainment.

GUEST OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

Hugh Lawson White

Governor Hugh Lawson White, who was born fifty years ago in Pike County, will be remembered long after he leaves the executive mansion as the state leader during whose administration taxes were lifted from homesteads, a program for balancing agriculture with industry was given its first impetus, and three thousand miles of paved roads were built where there had been only gravel before—the last being an accomplishment that many small-town and "country" physicians have looked upon as a godsend.

The forty-fifth governor, son of a captain in the Confederate Army, attended grammar school at Whitetown, near McComb, where his father was engaged in the lumber business. He later attended St. Thomas Hall, at Holly Springs, Mississippi, and from there he went to the University of Mississippi. He rounded out his education by taking a business course in New Orleans, returning home to enter the lumber business with his father.

During his young manhood at McComb, the future governor met Miss Judith Sugg, then a teacher in the public schools and now the First Lady of Mississippi. Mrs. White is a native of Providence, Kentucky. She was educated at Hopkinsville, Kentucky, and at the Cincinnati Conservatory of Music.

It was during this period of his life, too, that Governor White became known as a philanthropist. With other members of his family, he built a $60,000 church at McComb as a memorial to his father, Captain J. J. White. Since that time, he has given a donation of $50,000 to make possible the building of a new dormitory at Belhaven College, the Presbyterian school for girls at Jackson.

Moving to Columbia in 1912, he became active in both political, civic and business affairs. Still engaged in the lumber business, he realized the need for new industries to supplement the state's lagging agricultural program and its rapidly vanishing timber industry. Working on the same principle which he has embodied in his "balancing" program as governor, the young lumberman was instrumental in procuring a textile factory for the city. His efforts won him the mayor's chair of Columbia and he became known throughout the state.

On his election to the governorship in 1936, the former lumberman began to put into practice the theories of "balancing agriculture with industry" that had been on his mind for years. The legislature quickly agreed with his ideas on this subject. As a result, in the past four years Governor White has seen dozens of new industries locate in Mississippi — the realization of long-cherished ideas.

The two major highway paving programs, involving expenditure of approximately $90,000,000 and providing Mississippi with a network of super-highways unexcelled by any other state, have been carried out during Governor White's administration. Characteristic of his good judgment is the fact that the Governor invited the Federal Bureau of Public Roads to supervise the building of the new road system so that state engineers might have the advantage of the very latest methods of highway building.

However, not until the summer of 1938 did the governor see legislation passed which exempts homes from taxation by the state. In his opening address before the special session of the legislature called to consider homestead tax exemption, the chief executive said, "I would have it so that 'taxes' and 'homes' would never again be spoken of or thought of together in Mississippi. I would have it so that our people would be secure in the possession of their homes, regardless of what misfortune might overtake their lives . . accordingly, I do most earnestly recommend to you that you endeavor to find the necessary means to make possible the lifting of all taxes from the home . . ."

During the heat of the debate on the homestead exemption law, the governor suffered a heart attack. It was while he was recuperating from his illness that the bill passed. Eager for it to become a law, the governor signed the act while lying on his sick-bed, declaring that "this is one of the happiest days of my life."

Governor White in the main has had the wholehearted support of the people of the state. Business and professional men, as well as farmers and laborers, have united in praise of his administration. Typical of the newspaper expressions is an excerpt from an editorial in a recent issue of the VICKSBURG EVENING POST:

> "There never was an era in the past fifty years when so many of the people in Mississippi were so faithfully represented as they have been during the White administration. Governor White has carried out virtually every promise he made to the people, and some of the achievements of the White administration have changed the entire future of the state, and made it possible for Mississippi to become the successful pioneer in progressive legislation which has become national in scope.
>
> "If the White administration had accomplished nothing else, the enactment of the two acts gave Mississippi a modern highway system second to none in the South and an industrial act which is gradually bringing a new day to the state, would forever mark it as an epochal constructive era in the state's highway."

PAUL PADGET

Born March 5, 1905. B. A. University of Michigan, 1923; M. D., Johns Hopkins University School of Medicine, 1927; Interne in Medicine, the Baltimore City Hospitals 1927-1928; Assistant Resident and Resident Physician on Medical Service of Dr. Thomas R. Boggs, Baltimore City Hospitals, 1929-31; Jacques Loeb Fellow in Medicine, the Johns Hopkins University School of Medicine, and Assistant Dispensary Physician, the Johns Hopkins Hospital, 1931-33; Resident Physician, the Johns Hopkin Hospital, 1933-34; Instructor in Medicine the Johns Hopkins University School of Medicine, 1938; Associate in Medicine, the Johns Hopkins University School of Medicine and Assistant Visiting Physician, the Johns Hopkins Hospital; Consultant United States Public Health Service; Associate Editor, *American Journal of Syphilis, Gonorrhea and Venereal Diseases*; author of scientific papers, especially in the fields of cardio-respiratory physiology and syphilolgy.

DR. HEFFRON

Dr. Heffron was graduated from Harvard Medical School in 1928, took a short internship in neurology at the Boston City Hospital, and a medical internship at the Massachusetts General Hospital, finishing in 1931. That year he joined the Massachusetts State Department of Public Health as field director of the pneumonia study and service which was then being started, and continued in that position until the official study was completed in 1935. He spent several months preparing, with Dr. Lord, a handbook on pneumonia, and another comprehensive volume now in the press on all aspects of the disease.

Dr. Heffron is medical associate with the Commonwealth Fund, a diplomat of the National Board of Examiners, and a member of the U. S. Public Health Service Advisory Committee on the Prevention of Pneumonia Mortality.

DR. OSCAR BETHEA

Dr. Oscar W. Bethea of New Orleans who will present a paper on pneumonia before the Section on Medicine. He is a native of South Carolina, and was a citizen of Mississippi for many years. Our state has a sincere interest in him and feels a great pride in his accomplishments. He is one of Tulane's greatest instructors. For definite and explicit information in workable form he is not to be surpassed. His medical books you can practice by and fear no evil.

DR. GRADY E. CLAY

Ophthalmologist. B.S. Emory Univ., M.D. Univ. of Michigan, Interne Eye Dept. Univ. of Mich. 1913-16. Instructor of ophthalmology, Emory Univ. 1916-17, assoc. prof. oph. since 1918. He is a member of his local and state medical societies, the A. M. A., the Academy of Ophthalmology and Otolaryngology, American Ophthalmological, and the American Board of Ophthalmology. He is associate editor of THE AMERICAN JOURNAL OF OPHTHALMOLOGY. He is a member of the board of trustees of Emory University. His special interest in ophthalmology is lesions of the fundus oculi.

DR. CARL GRANBERRY

The doctors of Missisippi are delighted to welcome Dr. Carl back home on this occasion. His advancement in his chosen profession has been rapid and it has been merited. He is a fine instructor and a finer man than Dr. Carl Granberry you will not find. His paper before the Eye, Ear, Nose and Throat Section is "The Tracheotomy—Its Dangers and Complications."

DR. OREN MOORE

Dr. Moore began practicing in 1911 and has specialized in obstetrics and gynecology for about 20 years. He is a fellow of the American College of Surgeons, a fellow of the South Atlantic Association of Obstetricians and Gynecologists, a fellow of the American Association for the Study of Endocrinology, and of the North Carolina Obstetrical and Gynecological Association; a former associate professor of gynecology at the North Carolina Medical College, dean of the Obstetrical Department of the Southern Pediatric Seminar, author of books on "Prenatal Care" and "Information for the Expectant Mother," chief of the Department of Obstetrics and Gynecology at the Presbyterian Hospital, Charlotte, and retiring national president of the Davidson College Alumni Association.

DR. ALTON OCHSNER

He is now professor of surgery and head of the Department of Surgery, Tulane University School of Medicine, New Orleans, La.

In addition to numerous memberships, he is also a member of editorial board: *International Surgical Digest; Archives of Surgery; Journal of Digestive Diseases and Nutrition; Surgery Gynecology, and Obstetrics,* co-editor of *Surgery,* secretary Southern Medical Association, regent, American College of Surgeons.

Author: "Diseases of the Intestine;" "Nelson's Loose-leaf Living Surgery;" "Diseases of the Veins," Lewis' System of Surgery; "Diseases of the Thorax," Brennemann's "Pediatrics;" "Malignant Neoplasms of the Jejunum, Ileum, and Appendix," in book on "Treatment of Cancer and Allied Diseases."

DR. COBB PILCHER

Dr. Cobb Pilcher, neurosurgeon of Nashville, Tenn., will appear on the Section on Surgery program. He was graduated from Vanderbilt University in 1927. He is outstanding in his specialty. He is Associate Visiting surgeon, Neurol. Surg. Vanderbilt University and has been since 1933. Besides being a member of the Society Neurol. Surgeons he has many other affiliations. He is the author of numerous articles in various medical journals. The doctors of Mississippi are delighted to have him on their surgical program. His subject is "The Late Complications of Head Injuries and Their Treatment."

DR. WILLIAM MILTON ADAMS

Dr. Milton Adams of Memphis, plastic surgeon. Dr. Adams is a son of the late Dr. R. M. Adams, of Ripley, Miss., a graduate of the University of Mississippi, and Tulane. He interned and studied plastic surgery in New York City.

DR. A. CARLTON ERNSTENE

Dr. Ernstene was graduated from the State University of Iowa, College of Medicine, in 1925. After an internship he spent six years in Boston at the Harvard Medical School doing research work and teaching. Since 1932 he has been in charge of the section on cardiorespiratory diseases at the Cleveland Clinic, Cleveland, Ohio.

DR. EARL FLOYD

Dr. Floyd is professor of urology at Emory University School of Medicine, is president of the Southeastern Branch Society of the American Urological Association, is a president of the Georgia Urological Association, and is certfied by the American Board of Urology. He has several hospital staff affiliations.

A native of Georgia, Dr. Floyd was educated at the University of Georgia and at Emory University School of Medicine. He has been in the urology service at Grady Memorial Hospital since 1923.

TO THE MEMBERS OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

Dear Friends:

I sincerely hope that all of you are planning to attend our annual meeting which is to be held at Gulfport on May 9, 10, and 11. I hope also, that every county will see that it has representatives at the meeting of the House of Delegates which will be opened on Tuesday morning, May 9, and closed as the last part of the program, on Thursday morning, May 11.

If possible, I am requesting that every county, or component secretary, notify the delegates that they have been chosen and if for any reason the delegates or alternates cannot attend try to see that someone from that county does attend in the event they can not stay from Tuesday through Thursday. Please try to arrange to have some member from each county to attend the last day of the meeting. you cannot, or if you cannot be there on the first day, see that the alternate or some member is present to represent you.

The question of state medicine and farm security program will no doubt come before the House of Delegates and it is very important that every county shall have someone to represent it, as the doctors in every part of the state are divided on the position that should be taken about taking care of the Federal Farm Security clients. In some sections the doctors have entered the program, in others, they have turned it down. I see it, this is a question for the members of organized medicine in the various counties to handle.

I am sure that if you can make arrangement to attend this meeting you will not regret it. Hon. Hugh White, governor, will be the first speaker on the program of the regular session and it will be fine to give him a good crowd when he speaks. The doctors of the Gulf Coast have arranged a very attractive program for us and I sincerely hope that you will co-operate with them in every way possible so as to make their work as light as possible.

Hoping to see each and every one of you at our Gulfport meeting, I am

Yours sincerely,
JOE E. GREEN, president.

COMMERCIAL EXHIBITORS

The following is a list of the exhibitors for the Mississippi State Medical meeting. We appreciate the co-operation of these companies. They are our friends and co-workers. They help us to finance the expense of the meeting and they bring us much information that we need. The exhibitors are a big factor in making a meeting in many ways. They help to boost the meeting and call the attention of the doctors to it. We should work hand in hand with them. Give the exhibitors a cordial hand. This journal appreciates every exhibitor, and especially those who carry space with us and help to make this medical journal possible.

Dick X-Ray Co., Medical Arts Bldg., Memphis, Tenn.; Southern Surgical Supply Co., Tulane Ave. New Orleans, La.; J. A. Majors Co., 1302 Tulane Ave., New Orleans, La.; General Electric X-Ray Corp., New Orleans La.; Surgical Equipment Co., 1330 Tulane Ave., New Orleans, La.; E. R. Squibb & Sons New York, N. Y.; E. L. Mercere, 191 Madison Ave., Memphis Tenn.; American Surgical Supply Co. 323 E. Pearl Street, Jackson, Miss.; McKesson & Robbins, Inc., 1706 First Ave., Birmingham, Ala.; Mead Johnson & Co., Evansville Ind.; Lederle Laboratories, 205 Pere Marquette Bldg., New Orleans, La.; Southern Surgical Supply Co., New Orleans, La.; H. G. Fischer & Co. New Orleans, La.; Van Antwerp-Aldridge Drug Co., Mobile, Ala.

DR. G. Y. GILLESPIE

Dr. G. Y. Gillespie of Greenwood, president of the Delta Medical Society. The Delta is one of the very best district societies in the state, or any other state. It is a distinct honor to be president of it. This honor was worthily bestowed on this able leader in organized medicine.

NOTICE

The men who finished their two-year course in medicine at Ole Miss in 1928 are planning to have a reunion at our state medical association at Gulfport which meets May 9-11. Some of the men have not been contacted yet. The men who have already planned to be at the meeting are very anxious to have a hundred per cent attendance, if possible, at their reunion. If you have not already done so please notify Dr. Van Temple of Hattiesburg that you will be present. Write him about any member of this class you know, as he does not know the address of every member.

* * * *

There will be a luncheon for Dr. A. Carlton Ernstene of Cleveland, Ohio, who is a guest of the Section on Medicine, at the Markham Hotel and the room in which it will be held will accomodate about thirty. The plates will be seventy-five cents. Notify the chairman of the section as soon as possible before if you would like to attend.

* * * *

There will be a number of luncheons that you will want to attend. Keep them in mind when you arrive at the meeting.

THE IMPROMPTU ACCEPTANCE ADDRESS OF DR. FELIX J. UNDERWOOD

Given in response to the presentation to him by the public Health Workers of Mississippi and the members of the State Board of Health of his portrait, painted by the celebrated artist, Karl Wolfe of Jackson, at an annual banquet meeting of the Mississippi Public Health Association at the Robert E. Lee Hotel, Jackson, December, 1938.

Dr. Daniel J. Williams, life-long friend and associate of Dr. Underwood's, made a very touching presentation speech, reviewing Dr. Underwood's life and visibly affecting the audience, which filled to overflowing the roof and assembly room, as he spoke of the grim determination of Felix as a motherless boy struggling for an education, with health and determination on his side, but not a dollar that he did not make himself.

MY ASSOCIATE IN PUBLIC HEALTH WORK:

This is one time in my life when words fail to come and if they would come, they could not adequately express to you, my devoted and loyal co-workers, the appreciation and gratitude which my heart feels at this moment.

While on a bird-hunt in a decidedly rural community of the state recently, I visited a home with no bathing facilities except a small washpan on the water shelf on the front porch.

I told this friend how cheaply he could arrange a water supply system for his home that would give his wife running water in the kitchen and also that a small inexpensive bathroom would add to the health and comfort of the family.

The old boy said: "You know, Doc, me and water don't mix much in cold weather."

Said he: "My ole woman tried to get me to wash in a zinc tub during a warm spell about three weeks ago and I said to her, 'Now see here, Sally, what are you trying to do—start a fight?' "

He said he bluffed her for the winter, he hoped.

Now I ask you, Dan, why did you touch upon the many heartbreaking struggles of my youth and early life? Do you want to start a good cry? Well, you have succeeded—excuse my handkerchief.

As Dr. Williams has truly said: "It has been a long road from Central Grove to Jackson. From then until the present day the difficulties have been almost insurmountable at times and the way, regardless of what you may have thought, has never been easy, but the loyalty and co-operation of my many friends have made possible the success for which I have received the lion's share of credit.

I claim only one great achievement and that is my ability to surround myself with associates who are capable, loyal, dependable, and trustworthy to carry on the work assigned to them in such an acceptable manner that the program cannot fail.

Let us continue to work for the health and welfare of the people of Mississippi in the future as in the past, faithfully and efficiently. You have done a great job in public health. Ours is a life-saving business and we are proud of our achievements and, as leader, I receive the greater share of credit. I do not deserve any more credit than any one of you. Perhaps not as much as some of you.

To know Karl Wolfe is to love him. He was expected this evening and I regret that he could not come. I thoroughly enjoyed my association with him during my sittings before him. He certainly uses his brushes with the touch of a master and did awfully well, I think you will agree, with the subject at hand.

I accept this portrait, my fellow workers, with deep and abiding gratitude in behalf of myself and my family. May I be permitted to express the wish that the portrait be placed in the Board of Health offices, either the executive offices or perhaps better in the library that I have planned and struggled for so long and which at no distant day will be made the equal, if not the superior of any public health and medical library in the South. And may it mitted to hang there always, where in other times when other people have succeeded us it may be said of the Public Health Program or that day and time—their faith and sacrifices were fully justified.

You will note the urgent call of Dr. Joe Green, our able and efficient president, as he says it is important for you to attend the meeting this year. He has called your attention to important business that may come up. Any way you will want to sit in on all the scientific programs.

The trip to the coast will be delightful. The fishing is always good. The doctors of the coast are always most cordial. The Gulf breeze is soft and kind, but very invigorating. The roads are better than ever before and will make the trip more delightful. The cordial handshake of your fellow doctors and the swapping of ideas will be most pleasant and very beneficial. It will be good to attend the hospital association on the day before also.

Let us make our president feel good and benefit ourselves by swelling the attendance.

The first day of May is child health day. We should celebrate this day by doing something to secure better health for at least one child. We should, in fact, do something each day in the year for child health. Each child has a right to be well born, physically and mentally. There is a number of very definite things we can do to make the child more secure on its way to birth as well as after it reaches this important event. We could do much for the noble mother before the time comes for her to rock the cradle that would make her ruling of the world more secure.

The journal is coming out late in order to have the program of the state meeting. As our date of publication is the tenth we could not have waited for the May issue.

The indications are that we have an effective drug for the treatment of pneumonia, sulapyrindine. Whata blessing it will prove if it is as effective as it seems now.

On the 25th of March the Southern Medical Association under the able direction of Mr. C. P. Loranz entertained the Shelby County Medical Society at the Hotel Peabody. The president, Dr. Walter Vest was present to greet the doctors of the Medical Metropolis who turned out two hundred strong. Dr. W. L. Williamson is chairman of the committee on arrangements. He was present and appointed his committees. It was a delightful evening of good fellowship. We predict one of the Southern's greatest meetings at Memphis next November. Memphis is th best located city for a convntion in th entire south and the Shelby County doctors know how to entertain.

TUBERCULOSIS ABSTRACTS

The slogan of this year's Early Diagnosis Campaign is "Help Find Early Tuberculosis." The sub-slogan "8 out of 10 who come to the sanatorium are advanced cases" is based on national statistics which show that only about 20% of sanatorium admissions are classified as minimal cases. The classification is not an arbitrary one but conforms with standards agreed upon by eminent tuberculosis specialists. Every practitioner should be familiar with the terms, "minimal, moderately advanced and far advanced." They are defined in "Diagnostic Standards--Tuberculosis of the Lungs and Related Lymph Nodes" published by the National Tuberculosis Association. The most recent edition, 1938, brings the standards into line with current thought. The three stages of pulmonary tuberculosis are defined as follows:

Minimal

Slight lesions without demonstrable excavation confined to a small part of one or both lungs. The total extent of the lesions, regardless of distribution, shall not exceed the equivalent of the volume of lung tissue which lies above the second chondrosternal junction and the spine of the fourth or body of the fifth thoracic vertebra on one side.

Moderately Advanced

One or both lungs may be involved, but the total extent of the lesions shall not exceed the following limits:

a. Slight disseminated lesions which may extend through not more than the volume of one lung, or the equivalent of this in both lungs.

b. Dense and confluent lesions which may extend through not more than the equivalent of one third the volue of one lung.

c. Any graduation within the above limits.

d. Total diameter of cavities, if present, estimated not to exceed 4 cm.

Far Advanced

Lesions more extensive than Moderately Advanced.

Symptoms

None.

Slight. Constitutional and functional symptoms, such as loss of weight, ease of fatigue, and anorexia are slight and not rapidly progressive. Temperature not more than one-half degree above normal at any time during the twenty-four hours. Slight or moderate tachycardia. Cough, if any, is not hard or continuous; sputum, if any, may amount to one ounce or less in twentyfour hours.

Moderate. Symptoms of only moderate severity; fever, if any, does not exceed two degrees. No marked impairment of function, either local or constitutional, such as marked weakness, dyspnea and tachycardia. Sputum usually does not exceed three or four ounces in twenty-four hours.

Severe. Marked impairment of function, local or constitutional. Usually there are profound constitutional symptoms, such as weakness and continuous or recurrent fever. Cough often is hard and distressing and the sputum may be copious.

STAGE OF DISEASE INFLUENCES PROGNOSIS

Hilleboe succeeded in tracing 92.7% of more than 5,000 patients discharged from 10 of the 15 public tuberculosis sanatoria in Minnesota during the ten-year period 1926-1935. Patients studied were about equally divided between rural and urban residents. Of the total number about 36% were dead on discharge. This tremendous loss gives some measure of the tragic toll taken by this disease even during hospitalization when expert medical attention and every facility for treatment are available. Living and dead are classified, according to stage of disease, as shown approximately in Chart I.

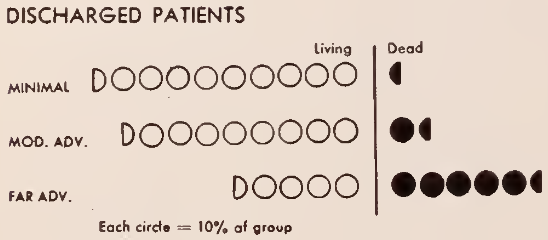


CHART I

Stage of disease influences the length of time needed for recovery. In this study all patients were in the sanatorium for 90 days or more. Living patients, not including those who were admitted more than once were classified according to the average length of stay in the sanatorium and the stage of the disease. Chart II pictures roughly the result.

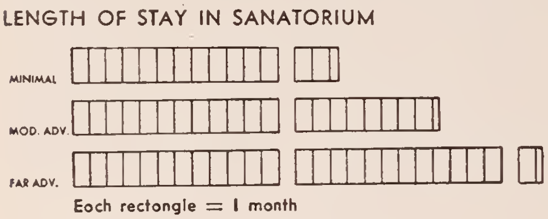


CHART II

The influence of stage of disease on the condition at the time of discharge was studied and the results confirmed the observation that the early case has a much better chance of satisfactory recovery than the advanced case. The result is summarized in Chart III.

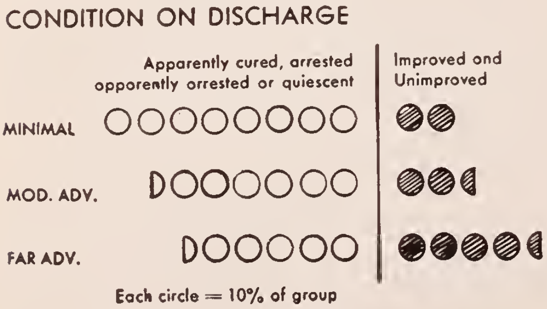
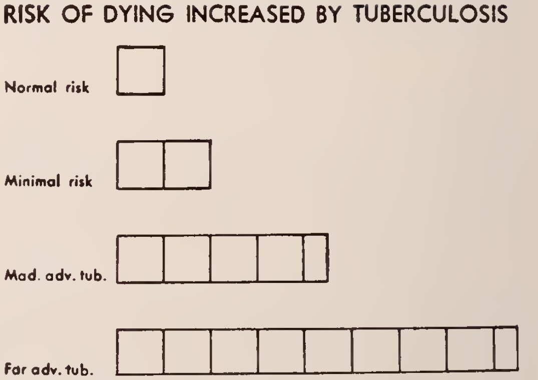


CHART III

The probabilities of dying from any given disease can be calculated by actuaries with a fair degree of accuracy. In a person with tuberculosis the risk of dying is increased and the risk is in direct ratio to the stage of disease as shown in Chart IV.



The "normal risk" of dying, represented by the single square, is based on actuarial tables of the general public

CHART IV.

"Statistical study of comparative mortality in discharged patients gives valid proof of the soundness of many clinical concepts regarding the disease. After all, one of the real values of statistics is to confirm the impressions of sound clinicians. Beneficial effects of early diagnosis of serious pulmonary tuberculosis lesions are reflected in the smaller risk of dying on the part of the minimal cases in comparison with the more advanced cases during the dangerous first five years after discharge. Tuberculosis must be diagnosed early."

(Follow-up Study of Patients Discharged From Tuberculosis Sanatoria. H. E. Hilleboe, M.D., Transactions of the Thirty-fourth Annual Meeting of the National Tuberculosis Association, 1938).

AMERICAN HEART ASSOCIATION

The fourteenth scientific session of the American Heart Association will be held at the Hotel Jefferson, St. Louis, Missouri. The general cardiac program will be given on Friday, May 12, and the program of the Section for the Study of Peripheral Circulation on Saturday, May 13.

OFFICERS OF THE MID-SOUTH POSTGRADUATE MEDICAL ASSEMBLY

Dr. H. Fay H. Jones, Little Rock, Ark., president; Dr. J. L. Dunavant, Ripley, Tenn., president-elect; Dr. J. P. Baird, Dyersburg, Tenn., vice-president; Dr. Charles H. Lutterloh, Hot Springs, Ark., vice-president; Dr. G. S. Bryan, Amory, Miss., vice-president; Dr. A. F. Cooper, Memphis, Tenn., secretary-treasurer; Dr. Gilbert J. Levy, Memphis, Tenn., director of exhibits.

DR. PERCY WALL

Dr. Percy Wall of Jackson, Miss., an able parliamentarian, an eloquent speaker, a scholarly gentleman who will succeed to the presidency of the Mississippi State Medical Association at its next annual session which convenes at Gulfport May 9.

DR. J. RICE WILLIAMS

Dr. J. Rice Williams succeeds Dr. Percy Wall as speaker of the house of delegates of the Mississippi State Medical Association. In the interest of our association he is as faithful as Abraham and as wise as Solomon.

There is nothing personal about not putting in the picture of Dr. J. Rice. Of course we would not expect it to win in a beauty show, but anyway it is mighty good to know him and drink of his wisdom and be inspired by his fellowship.

You will note the list of exhibitors who have engaged space at the Mississippi State Medical Association at the Markham Hotel, Gulfport, May 9-11. We are delighted to have each one of them. They help us. There is always plenty to learn from the exhibitors. Let us give them a cordial and a co-operative hand and show our appreciation. We should work as brothers in a common cause for good. The exhibitor has his problems and we have ours. He is always ready to show us his latest instruments and equipment, his nicest tablets and strongest vitamins. Often times he is ready with a very good talk on pharmacy, about all we ever hear. When you are nice to the exhibitors you show your appreciation also to the local committee which has arranged for every want and comfort to make our stay profitable and pleasant.

DR. W. C. WALKER

Dr. W. C. Walker of Houlka takes his fishing rod in hand for the spring season. He is looking forward with great anticipation to the next meeting of the Northeast Thirteen-County Medical Society which will convene in his home town, the hub of the universe. Dr. Walker is an honorary member of the Woman's Auxiliary and the official orator of this fraternity. He has a warm heart and an eloquent tongue. His loyalty to the ethics and the ideals of the medical profession are as steadfast as his love is strong for beautiful women. On the 14th of June, the date of the next quarterly meeting, he will celebrate his 80th birthday. It will no doubt be one of the largest meetings this society has ever held. He plans to have Governor and Mrs. White with him on this occasion.

News and Comments

Dr. J. B. McElroy, who suffered a fractured neck in an auto accident last Monday, is recovering at his home, 2240 N. Parkway.

Dr. Henry Hill, attending physician, said Dr. McElroy would be unable to resume his practice for six weeks or two months.

Hundreds of doctors in the Mid-South deeply regret to hear of the injury sustained by Dr. McElroy. He is one of the outstanding internists of the Southern states. He is a profound student, his judgment is good, and his heart is sympathetic. Dr. J. B. McElroy is a great teacher and many are the doctors in the Mid-South who have sat at his feet and drunk from his fountain of knowledge.

* * * *

Jackson, Tenn., April 14.—The Tennessee State Medical Association ended its convention at Jackson yesterday, electing Dr. W. O. Baird of Henderson president and selecting Chattanooga for the site of the 1940 convention.

Vice presidents named were: Dr. Julian Rice of Dyersburg, Dr. R. B. Gaston of Lebanon, Dr. J. E. Carson of Maryville.

Dr. E. R. Zemp of Knoxville was re-elected speaker of the house of delegates; Dr. C. M. Hamilton of Nashville, treasurer. Dr. H. H. Shoulders of Nashville, secretary, and Dr. W. M. Hardy of Nashville, assistant secretary, were re-elected.

Dr. J. B. Stanford of Memphis and Dr. Tom R. Barry of Knoxville, the retiring president, were placed on the board of trustees.

The association passed a resolution opposing the Wagner Act in its present form. Dr. Shoulders said the opposition was "on a basis of its vagueness and provisions for administration of benefits mentioned in the bill—powers vested to dictate conditions under which sick people receive their medical care."

"I see a man was excused from serving on a jury in Chicago because he frankly stated that he didn't think he knew enough to serve."

"His frankness was commendable—but I bet the people on both sides were sorry to lose him."

WOMAN'S AUXILIARY
TO THE
MISSISSIPPI STATE MEDICAL ASS'N

President	Mrs. John B. Howell	Canton
President-elect	Mrs. Hugh Johnston, Jr.	Vicksburg
1st Vice President	Mrs. C. C. Hightower	Hattiesburg
2nd Vice President	Mrs. Henry Boswell	Sanatorium
3rd Vice President	Mrs. F. L. Van Alstine	Jackson
4th Vice President	Mrs. Temple Ainsworth	Jackson
Recording Secretary	Mrs. H. C. Ricks	Jackson
Treasurer	Mrs. J. D. Simmons	Cleveland
Parliamentarian	Mrs. F. E. Rehfeldt	Jackson

Councilors: 1st district, Mrs. T. G. Hughes, Clarksdale; 2nd district, Mrs. C. M. Roberts, New Albany; 3rd district, Mrs. W. L. Orr, Fulton; 4th district, to be appointed; 5th district, Mrs. L. H. Clark, Vicksburg; 6th district, to be appointed; 7th district, Mrs. L. L. Polk, Purvis; 8th district, Mrs. W. K. Stowers, Natchez; 9th district, Mrs. D. J. Williams, Gulfport.

MRS. JOHH B. HOWELL

In 1922 the Woman's Auxiliary to the American Medical Association was organized in St. Louis and Mrs. Dan J. Williams of Gulfport was appointed as organizer for the state of Mississippi.

Through the earnest efforts of Mrs. Williams, on May 9, 1923, the Woman's Auxiliary to the Mississippi State Medical Association was organized in Vicksburg.

Dr. Sydney W. Johnston was president of the Mississippi State Medical Association at the time and Mrs. Sydney Johnston acted as hostess.

The following are the names of the charter members:

Mrs. Dan J. Williams, Gulfport; Mrs. H. C. Denson, Mrs. W. H. Parsons, Mrs. M. H. Bell, Mrs. S. W Johnston, Mrs L S. Lippincott, Mrs. George Street, Mrs. Vincent Bondelli, Mrs. H. H. Haralson, Mrs. E.F. Howard, Mrs. Augustus Street, all of Vicksburg; Mrs. W. D. McCaleb, Yazoo City; Mrs. H. S. Hairston, Meridian; Mrs. T. E. Ross, Hattiesburg, and Mrs. James Acker of Aberdeen.

Now that the Mississippi Auxiliary has reached her sixteenth birthday it seems fitting that we go to Gulfport and help celebrate the event where Mrs. Williams will give the address of welcome.

A program of entertainment planned for our enjoyment is given in this issue of the MISSISSIPPI DOCTOR and nothing has been spared for our pleasure.

To most of us it means a vacation where we can make new friendships and renew old ones and as with other opportunities, the large personal returns which will accrue to each of us depend upon the advantage we take.

It is an opportunity which will enable us to gain knowledge, enrich our spirits and gain inspiration which will go with us through life. It is an opportunity to get away from the daily routine and take our doctors away from the responsibilities which each new day brings to them.

Let's plan to go. This is our opportunity.

Mrs. John B. Howell.

The Central Medical Auxiliary observed Doctor's Day with a buffet supper at the University Club in Jackson on March fourteenth.

Each small table was centered with a bowl of pansies and mint cups of shamrocks, which with the centerpiece of an Irish colleen rising from a terraced arrangement of pansies gave a St. Patrick atmosphere to the large dining room.

A very lovely program of music was given by a trio of Millsaps students under the leadership of Paul Sheffield, son of Dr. and Mrs. H. C. Sheffield.

About fifty-four doctors and auxiliary members were present to enjoy a carefree fellowship during the evening, several remaining to enjoy informal dancing for some time, after others had said good-night.

On April 4, Mrs. Henry Boswell and Mrs. John Henry Boswell and Mrs. John Harter, assisted by the other good friends at the Preventorium, entertained the Auxiliary to Central Medical Society in the living room of the Preventorium.

Dr. Boswell gave a most hearty welcome to the Auxiliary, expressing his thanks for the work done by the Auxiliary as a whole, and told in detail some of the work being accomplished by the Preventorium.

Officers were elected for the coming year as follows: President, Mrs. H. C. Sheffield; vice-president, Mrs. J. A. Milne; secretary, Mrs. J. C. Henthorne; treasurer, Mrs. George E. Riley; historian, Mrs. F. L. Van Alstine, parliamentarian, Mrs. John Harter.

Mrs. John Howell outlined the program for the annual meeting and a large number expressed their intention of attending.

Mrs. Lee Lipscomb

NORTHEAST MISSISSIPPI THIRTEEN-COUNTY MEDICAL AUXILIARY

The quarterly meeting of the Northeast Mississippi Thirteen-County Medical Auxiliary was held at the home of Mrs. Thos. F. Wolford, on March thirteen, at Columbus, Mississippi. A colorful assortment of spring flowers added freshness and charm to the interior of the pretty suburban home.

Mrs. V. B. Philpot, the new president, presided over the meeting. She presented plans for increased interest in the activities of the auxiliary, inviting Columbus wives to affiliate with the entire auxiliary. Mrs. Guinn read the secretary's report and the by-laws and constitution as adhered to by the state organization.

Mrs. A. L. Glaze of Birmingham, Ala., and Dr. W. C. Walker of Houlka, were welcomed as guests. Each brought an appreciated message. A program of music was then beautifully rendered by Miss Lipscomb and two M. S. C. W. voice and piano students, Misses McCreary and Shell.

Concluding the meeting the hostess served a collation of food dainties with coca colas.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

Public Health—An Opportunity For Public Service*

H. K. KROEZE, C. E.
Director, Division of Sanitary Engineering,
Mississippi State Board of Health
JACKSON, MISS.

In beginning this address, I shall not spend much time in expanding the customary platitudes about my gratitude for the signal honor you bestowed upon me when you elected me to the presidency of this Association. I will say, however, that I am deeply grateful for this honor, the more so since I consider it an honor not only to me, but to the particular branch of the public health profession to which I belong. I am sure I may also say, without giving offense, that I feel especially honored to have been elected your second president and to have had the additional distinction of succeeding in this office our worthy friend and illustrious leader, Dr. Felix J. Underwood.

Since public health is passing through so many evolutionary changes, and since the attitude of the people in this country toward the responsibility of the governments, federal, state and local, in public health is crystallizing toward a more rational wide-spread program, I have felt that a brief discussion of public health service as a career and an opportunity for public service would be timely.

In justifying a career of public service, one should have in mind whether or not that career offers him an opportunity to render a real service to his fellow man and whether the community in which he lives will be benefited as a result of his years of service. This may sound visionary, but I believe we can safely say that the normal individual is happiest when he feels that he is rendering unselfish service. We all have experienced that feeling of buoyancy which results from giving either of time, money, or services, the more so when that personal effort is made in the spirit of help to people among whom we live. As a reward for unselfish service, regardless of the motive, I believe a career in public health work offers unlimited opportunities in personal satisfaction and service to the community. One cannot approach this idea of public service, however, without some consideration of monetary reward. While attempting to discuss the subject, one must of necessity give thought to the question of personal security, but certainly as not of the greatest significance to one who wishes to choose such a career of public service. Let us then devote our attention to a brief discussion of what opportunities for service are offered in the field of preventive medicine.

Public health effort has not, and cannot, by the very nature of its purpose remain stationary. Through the years there has been a constant evolution of processes which have contributed to the alleviation of disease and prevention of early death. Let us consider for a moment how this evolution of public health endeavor has widened our opportunities for service. Someone has said that the development of any science shows three stages: (1) the stage of superstition, (2) the stage of the collection of facts and the classification of same, and, (3) the stage of application of facts. Preventive medicine, in so far, at least, as it applies to the transmission of disease, is rather well into the second stage, and considerable progress has been made in the development of the third stage. While it may seem that we are generally beyond the first stage, the truth is that too many people are yet under the influence of various interesting and bizarre superstitions which often seriously handicap the public health officer in his endeavors to enlighten the public in matters of disease prevention. Yet, if we contrast present day conditions and our relative security from disease, it will help us to appreciate the immense distance we have come since the days of dirt, disease, ignorance, and pestilence when super-

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**President's Address — Mississippi Public Health Association, December* 8-9, 1938.

stition was rampant and pestilence was generally considered an act of divine providence.

Not until sometime after the beginning of the nineteenth century was a real start made in the collection and classification of facts, on a scientific basis, of the causes of sickness and the widespread epidemics which continued to occur. Men of science and medicine began the task of sifting the facts and looked for the cause of various maladies which, to their minds, could not be explained by the superstitious beliefs so prevalent.

Pioneers in this endeavor were such men as Snow and Budd, who, as a result of their fundamental epidemiological studies, made without benefit of our present knowledge of bacteriology, became convinced that a relationship existed between environment and disease. In those early days the effort of disease control was principally concerned with conditions rather than people, and the vast problems of sanitation began to receive attention. The development of bacteriology proved their basic principles were sound but led the way to a new conception of the modes of disease transmission. From this developed rapidly a broad program of communicable disease control, and the tremendous reduction of many diseases caused by an unhealthful environment following this new conception is one of the brightest chapters in the history of man's struggle for a fuller and longer life. The continued collection and classification of facts has led us into a third era in which the non-communicable as well as the communicable diseases are engaging our attention. Now, the individual is receiving more attention and the idea of a more personalized health service than formerly is not only needed to advance our gains but is being demanded by the public. This concept is infinitely broader than the prevention of the spread of infection alone. Thus, through our increasing knowledge, public health has been passing through an evolutionary process until the present program of preventive medicine offers a much greater opportunity for service than our former conceptions permitted.

In our discussion of public health as an opportunity for service, we should give consideration to the expanding horizons of public health problems and the responsibilities that fall on us as a result. Public health administration will assume its proper place in the scientific application of knowledge only so long as it is based on sound principles of preventive medicine. With the development of new knowledge, these principles are constantly changing. Thus, with constantly changing horizons, public health cannot remain static but must be dynamic if progress is maintained and if we are to measure up to our full responsibilities. Our increasing knowledge of the etiology of disease and control of morbid conditions requires changes of methods and a shifting of emphasis, activities, personnel, and point of view. In the field of environmental sanitation our concepts of service have undergone a remarkable change in recent years. The relation of such conditions as housing, air conditioning, atmospheric pollution, noise, and others, to health are receiving more consideration. The question of personal hygiene and its effect on the well-being of the community challenges the ingenuity of the sanitarian. Malaria, still a problem of the first magnitude in our Southern states, presents a vast opportunity for research and control. More knowledge must be available concerning the parasite and the mosquito as well as the chemotherapy of malaria if we are to develop new methods to lower the incidence and economic loss attributed to this disease. Progress in this field is being made and present methods of malaria mosquito control show decided savings over similar methods formerly applied.

Another example of our expanding horizons is in syphilis control.. This country has been negligent in attacking this problem of national importance. Other countries, particularly the Scandinavian, have shown the way. Is there any reason why, with our present public health leadership and knowledge of this disease, this country cannot render a like service to our people? Present trends indicate a determination of effort in this field and the opportunities for service are unlimited.

What of the pneumonias? Have we given this disease the consideration it deserves? Research has provided the knowledge through which pneumonia can be controlled and the up-to-date public health administrator is beginning to assume a greater responsibility with reference to this disease than in the past.

Consider our knowledge and methods of tuberculosis control today with those of one or two decades ago. Modern epidemiology and research into the biology of the tubercle bacillus are expanding our knowledge of this disease enormously. It has been stated that we are on the threshold of a greater opportunity for the eradication of tuberculosis than any other infection of like importance.

Present trends in the conservation of maternal and child-life and the introduction of bedside nursing care are leading the way to a newer understanding of the need for more adequate methods of reducing this appalling loss. Mental hygiene, accident prevention, occupational hygiene, cancer research and control, heart disease, and many other problems of a non-communicable nature, our knowledge of which is undergoing a rapid evolution, are further indications of our changing conceptions of public health problems. We, as public health servants, must take cognizance of these problems and render what service we can in preventing their occurrence.

In this broadening of scope of public health we must not lose sight of the social and economic aspects of our service. We cannot live within a Chinese wall, so to speak, and sally forth as suits our pleasure to make whatever use is possible of the services of other governmental and voluntary agencies in promoting our own aims. Rather, we need to give serious thought to that inter-departmental relationship which will most effectively serve the people as a whole. This thought was admirably stated recently by Dr. E. L. Bishop, director of health of the Tennessee Valley Authority, when he said: "The development of a philosophy of relationship will be one of the fundamental needs in public service of the future. We must not set up isolated public services—be it public health, education, agricultural extension, or home management—we must not establish a single unit in a water-tight compartment. The ultimate point of service is the individual and we all serve him. A part of each element of any service is related to parts of other services. There is a relationship between education and public health service. The relationship of home management and agricultural extension work to health is close though indirect. We shall have to explore those opportunities and possibilities in studies of the relationship of one public welfare service to another with much more concentration than we have shown if we are to serve our people as we should serve them. To my mind, this is one of the ideas which makes public health as a career fascinating."

There is an increasing understanding by the people of the vital need for the fuller application of existing knowledge for the betterment of health and more personalized health service. The fundamental changes which have been taking place in our conceptions of service and scope of public health have rapidly developed a need of better trained workers and leadership. There has likewise been realized the fact that unless we are prepared to give adequate leadership and direction to the greater opportunities, we shall inevitably find that leadership will be found elsewhere and the whole progress of the cause of public health will suffer. Fortunately, this increasing understanding has likewise led to a greater opportunity for the improvement of knowledge of those who seek public health as a career of public service. The inclusion in the Social Security Act of the fact that health security is a part of Social Security has opened the greatest of opportunities for the development of trained workers and leaders in public health. This acknowledgment has made possible the development of training facilities in public health that but a few years ago were beyond the fondest dreams of the most optimistic. I feel I cannot impress too strongly upon you the profound influence this development for improved leadership, higher personnel qualifications, better training for public health workers will have on your selection of public health as a career and an opportunity for public service.

In the understanding of the public and its increasing demands for the betterment of health, I feel I would be remiss if I did not mention our dependence on the sympathetic understanding, assistance, and cooperation of the medical profession, as we feel our way into this era of more personalized health service. There is an increasing sense of responsibility on the part of both the practicing physician and the public health administrator that they must work together, with a clear understanding of the interests and obligations of each, for the promotion of the welfare of the whole people. This attitude is happily leading to a correlation of services of the private physician with the services of the public health agency as we march on to the broader understanding of health service to humanity. But for the leaders of the medical profession and their cooperation, the leadership of the public health worker would be infinitely more difficult and progress would be greatly retarded.

While we realize the opportunities for service in the field of public health are plentiful, we cannot fail to give some thought to the matter of monetary reward for those who devote their lives to this service. Each one of us, regardless of our sincerity of purpose and desire of attainment of that ideal of service with which we are imbued, must give consideration to the question of personal security. I have yet to learn of the service devoted to the alleviation of the sufferings of mankind wherein riches can be found. What then can we expect in the way of security, which in recent years has been the cause of fear on the part of thousands of our fellow citizens?

Since time is an element of success in health work, tenure of office is important. There has been a steady development in this state, fostered both by the will of the people and through appropriate legislation, of the idea that public health to be efficient must be administered by people with sufficient ability to perform the tasks assigned them. Furthermore, there is a definite indication that with the increasing employment of trained workers the public is coming to appreciate the fact that health work is above politics. These trends are adding to a security of employment in the public health service of this state that is approaching a tradition. We have not yet reached the stage where tenure of office can be stabilized by law but certainly we have demonstrated the value of placing the emphasis on merit and the desire to render the public the most effective service rather than on expediency, and this process is receiving the appreciation of our people. Such a demonstration will certainly have its influence in crystallizing public sentiment for suitable legislation applying to security in office.

Specialization in public health work has been growing. It has been a long time since our profession was exclusively of a medical nature, and it would be absurd to expect a man with only one kind of training to be proficient in all kinds of public health work. As our horizon has expanded so has the need for greater specialization. The larger scope and range of special problems confronting us has widened our possibilities and, likewise, increased a demand for more adequate services. This in itself has increased the opportunity for professional achievement for those who have the training and ability to rise above the qualities of the routine worker. This also applies not only to those who are fortunate enough to be classed as medical officers, but also to the sanitation, the public health nurse, the laboratory technician, the dental hygienist, the stenographer, and the clerk. These are workers all and very important parts of the whole. But for their enthusiasm, energy, and devotion to service, how much more difficult would be the task!

While I have talked at length in terms of opportunity of service and of developments which augur well for security in office, I have said little of financial emoluments for our endeavors. In a service such as ours, this has very definite limitations. But the fact that there can be some assurance of permanency in office for trained personnel makes the compensation received more nearly commensurate with the ability shown and type of service rendered than formerly. Furthermore, the salary range itself has shown considerable improvement as public health has progressed into its broader aspects and the public understanding of and the needs for betterment of health increases. And we must not lose sight of the fact that this understanding of the public is dependent almost entirely on our own education of the people.

In conclusion, I would like to quote a few lines which seem appropriate to the idea of opportunity for service I have feebly attempted to outline tonight. Dr. Milton J. Rosenau, one of the most distinguished authorities in public health, wrote:

"Preventive medicine dreams of a time when there shall be enough for all, and every man shall bear his share of labor in accordance with his ability, and every man shall possess sufficient for the need of his body and the demands of health. These things he shall have as a matter of justice and not of charity.

Preventive medicine dreams of a time when there shall be no unnecessary suffering and no premature deaths; when the welfare of the people shall be our highest concern; when humanity and mercy shall replace greed and selfishness; and it dreams that all these things will be accomplished through the wisdom of man. Preventive medicine dreams of these things, not with the hope that we, individually, may participate in them, but with the joy that we may aid in their coming to those who shall live after us. When young men have vision the dreams of old men come true."

A Clinical and Bacteriological Survey of Bacillary Dysentery*

HARVEY F. GARRISON, JR., M. D.
AND
CATHERINE MAYFIELD, B. A., M. S.
JACKSON, MISS.

The purpose of this paper is not to bring out anything new in the way of classification, symptoms or treatment of bacillary dysentery. We are giving this preliminary report of our studies made during the year 1937, with the hope of stimulating more study and accurate diagnosis of diarrheas in children. This has been a thorough attempt at a diagnostic study, and we hope to eliminate such non-specific diagnoses as "flux, colitis and ileocolitis, and intestinal flu" from our records. Too often, the severity of the illness alone determines the diagnosis rather than supportive evidence gained by examination of the stools.

In 1936, while on ward rounds, in one of the larger children's hospitals in Chicago, the chief of staff asked if we did not have a great many cases of bacillary dysentery in Mississippi. I replied that we had numerous diarrheas, but few bacillary dysenteries. I should have explained further that we occasionally cultured stools and very rarely obtained a positive. Since Mrs. Mayfield has been connected with the State Laboratory, the technic and procedure of stool culture have been improved and our percentage of positives have greatly increased.

The technic of stool culture used by the laboratory is as follows:

Obtain a fresh stool and place a lump of feces, the size of a pea, in 30% glycerine in normal saline solution. It is of the utmost importance that the specimen should be placed in this preservative immediately after passage. The specimen should also be sent immediately to the laboratory for culture. Delay of 36 to 48 hours greatly decreases the likelihood of obtaining positive cultures. Several stool cultures are frequently necessary to obtain positive results. The highest percentage of positive cultures is obtained during the first few days of the illness. After the fifth day, the chances for recovering the organisms rapidly diminish.

Specimens are streaked on Endo, lithium chloride Endo, and desoxycholate citrate media from which colonies are picked to Russell's double sugar. Later they are identified on different sugars. The cultures are plated three days. In addition to the cultural identification, aglutination with specific sera is also made.

Since the attempt to culture these bacilli from the stool fails even under the most favorable conditions, and on repeated examinations in some cases, clinical diagnosis can not be made absolutely dependent on the bacteriological findings. According to various authors a bacteriological demonstration is probable in from 50 to 90% of the cases. During the summer of 1937, I submitted 68 stool specimens to the laboratory for examination, 26 of which were found to be positive. A percentage of 33%. None of these was a repeated culture from the same case.

Bacillary dysentery is in reality a disease caused by a rather large number of closely related organisms. Clinical manifestations vary—from the fulminating onset with convulsions, high fever and death within 6 to 8 hours, before any diarrheal manifestations—to the very mild diarrhea. Diarrhea is not always the clinical manifestation— Silverman has shown the frequent relationship to chronic and ulcerative colitis. What is known clinically as bacillary dysentery may be caused by any of the typhoid-dysentery group. The Shiga and Flexner types are regarded as causing the most severe clinical symptoms. The Shiga bacillus produces a soluble exotoxin, which is neurotrophic, and an endotoxin.

The other strains produce only the endotoxin. We had a small epidemic of dysentery in June, 1937, here in Jackson, that was due to the Sonne-like organism. Clinically, these cases had acute onsets with fever, vomiting, abdominal pains, diarrhea and bloody mucous stools. The duration of illness averaged 4.9 days. In contrast to these, the cases showing the Flexner bacillus were more toxic and the duration of illness averaged 17.5 days. These cases infected with the Flexnor bacillus came from different communities throughout the state.

Prophylaxis is very important from a public health standpoint. It is closely linked with personal and community hygiene. By the use of vaccines, epidemics of typhoid have been greatly reduced even in the rural areas where good sanitation is at a minimum. Unfortunately, no such vaccine against bacillary dysentery has proved practical. The incidence of this disease is in direct proportion to the public health education. In rural communities, the house fly is the most important factor in the spread of the disease. The role played by carriers, the importance of polluted water, contaminated milk and foods, cannot be too greatly emphasized. The well known use of "typhoid precautions," in all cases of diarrhea, would reduce the spread of the disease. The administration of sodium thiocyanate by mouth to exposed members of the family and close contacts has been recommended. Adequate public health measures offer the best hope of keeping bacillary dysentery at a minimum in any community.

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*Read before the Section on Hygiene and Public Health at the Seventy-first Annual Session of the Mississippi State Medical Association, Jackson, April, 19, 1938.

TABLE 1-A

COMPARISON OF MEDIA FOR ISOLATION OF BACILLARY DYSENTERIES

DIAGNOSTIC
1937

Type of Dysentery	Positive Specimens: Total Positive Dysentery Cases	Endo	Lithium Chloride Endo	Desoxycholate-Citrate
Shiga	2	2		1
Schmitz				
Flexner-Group	35	15	8	34
Sonne-Like	13		4	12
Unclassified	6		1	6
Total by Media	56	25	12	53

TABLE 1-B

COMPARISON OF MEDIA FOR ISOLATION OF BACILLARY DYSENTRIES

NO HISTORY
1937

Type of Dysentery	Positive Specimens: Total Positive Dysentery	Endo	Lithium Chloride Endo	Desoxycholate-Citrate
Shiga				
Schmitz	3			3
Flexner-Group	54		11	52
Sonne-Like	1		1	1
Unclassified	8		2	6
Total by Media	66		14	62

TABLE 2

CLINICAL DATA ON CASES OF SONNE-LIKE DYSENTERY

1937

Name	Age	Onset	Date Specimen Was Examined	No. B. M. in 24 Hours	Positive for Dysentery Bacilli (Sonne)	No. Days to Clin. Recov.:
M. A.	3 yrs.	7-6-37	7-8-37	18	x	3
P. W.	5 yrs.	6-21-37	6-21-37	20	x	3
S. R.	17 mo.	7-3-37	7-8-37	8	x	5
E. L.	3 yrs.	7-7-37	7-9-37	8	x	5
J. L.	9 mo.	7-2-37	7-3-37	18	x	4
T. D.	19 mo.	6-24-37	6-25-37	9	x	5
G. P.	3½ yrs.	6-28-37	6-29-37	18	x	6
J. L.	4 yrs.	6-26-37	7-2-37	5	x	
B. N.	16 mo.	4-23-37	4-23-37	6	x	3
B. F.	5 mo.	5-25-37	5-28-37	18	x	10
D. N.	18 mo.	6-7-37	6-10-37	10	x	
B. G.	4 yrs.	5-31-37	6-2-37	8	x	
J. E.	20 mo.	6-3-37	6-10-37	12	x	6
J. G.	10 yrs.	6-9-37	6-17-37	6	x	10
B. K.	8 yrs.	7-6-37	7-6-37	3	?	3
W. K.	2 yrs.	7-3-37	7-6-37	11	x	4
						Av. 4.9 days

Since this is a preliminary report, and being made before the public health section, we

TABLE 3

CLINICAL DATA ON CASES OF FLEXNER DYSENTERY 1937

	Age	Onset 1937	Date Specimen Obtained	Positive Dysentery: Flexner	Positive Dysentery: Unclassified	No. Days Clin. Recov.
Baby P.	1 Yr.	5-20-37	6-19-37	x		28
S. M.	5 Yrs.	6-16-37	6-18-37	x		16
D. T.	12 Yrs.	6-15-37	6-17-37	x		3
Baby N & J	5 mo.	7-6-37	7-19-37	x		22
Baby C	3 Yrs.	6-14-37	6-19-37	x		18
D. R.	23 Mo.	6-20-37	6-21-37	x		14
W. B. T.	2½ Yrs.	7-4-37	7-10-37		x	22
C. T.		6- -37	6-21-37		x	?
J. O. P.	6 Yrs.	6-30-37	7-1-37		x	?
						Av. 17.5 Days

TABLE 4

BACILLARY DYSENTERY IN MISSISSIPPI 1935-1937

DYSENTERY	1935	1936	1937
CASES REPORTED			
Bacillary	6824	9452	9614
DEATHS REPORTED—DYSENTERY			
Bacillary	64	76	66
Unspecified	11	18	27
Diarrhoea & Enteritis Under 2 Years	232	414	368
Diarrhoea & Enteritis 2 Years & Over	137	177	147
Total Bacillary & Unspecified Dysentery, Diarrhoea and Enteritis	444	685	608
DIAGNOSED DYSENTERY (State Laboratory)			
Bacillary	1	8	56

will refrain from any lengthy discussion of active treatment used in these cases. It is sufficient to say that bed rest, the initial purge only, the judicious and very cautious use of sedatives, the 24-hour starvation period followed by a diet high in protein, low in carbohydrates and practically fat free—together with the maintenance of body fluids and minerals by the use of intravenous solutions and blood transfusions—are the measures universally employed. The use of serums, vaccines, bacteriophages, chemotherapy, apple, banana and other special diets have not been of conclusively proven value. We use the former mentioned rather universally employed measures and are trying some of the special diets and chemotherapy. We do not feel that the number of cases or the results obtained with the new measures warrant any report on the results as yet.

SUMMARY

The morbidity and mortality reported are showing a steady increase in bacillary dysentery. The control of this disease is largely a public health problem and its incidence is in direct proportion to the public health education.

Improved technic and culture media have increased the percentage of positive stool cultures. Specimens obtained during the first few days of the illness, give a higher percentage of positives. Repeated cultures are sometimes necessary.

A mild epidemic of bacillary dysentery due to a Sonne-like organism is contrasted with cases due to the Flexnor bacillus which were more severe.

DISCUSSION

DR. GUY C. JARRATT (Vicksburg): Dr. Garrison stated in his opening paragraph that he hoped this paper would stimulate work with the aid of a more accurate diagnosis of some of the diarrheas we encounter in practice. I certainly hope that this is true, since in one of Dr. Garrison's slides you note that he reported the statistics of the health department of the state that, in the year 1935, there were reported 6,824 cases of dysentery. I would certainly hate to think that this is an accurate state of affairs and that they were not diagnosed from positive cultures. Of course, no case of dysentery should be reported as dysentery unless a positive culture of the stool is obtained and, if this were done in the above reported cases, I am sure that there would have been many thousands less cases reported of bacillary dysentery in the state during the year. One reason, I think, that this is not a true report, is that it has not been from my clinical experience with diarrhea.

In the past five years, there have been admitted to the pediatric department of the Vicksburg Sanitarium sixty-four (64) cases of diarrhea from various causes. Of these sixty-four cases, there were from two to five stools cultured on each case, with the result that only four of the sixty-four proved to be of the true bacillary type. This should certainly stimulate us to be more careful in reporting dysentery, because it is appalling to have the above number of cases of dysentery reported in a state. This is true, not only from our own health standpoint, but also from the fact that many outside industries have only one source to obtain the status of the health of the state in, and that is through the health department, and I am afraid that if any outside industry were planning on coming into Mississippi and would receive from the state department such a report, they would think a long time before establishing here. We must remember that we still have diarrheas from other causes, and these far outnumber the dysentery group.

Dr. Leon S. Lippincott (Vicksburg): I would commend Dr. Garrison and Mrs. Mayfield on their investigative spirit. As stated by the chairman, I have been interested for many years in the reports of the prevalence of bacillary dysentery in Mississippi, mostly without laboratory confirmation. For example, Dr. Garrison shows that in 1935, 6,824 cases were reported but that only one of these cases was confirmed by the State Hygienic Laboratory.

Such an incidence would be serious if true because real bacillary dysentery kills people. Apparently health authorities have not worried much over such unconfirmed reports. If there were many thousands of cases, it seems likely that the Rockefeller and the various other foundations would have become interested as they have in much smaller numbers elsewhere.

My own experience has been that true bacillary dysentery is a comparatively rare disease in this state. We try to check all suspicious cases very carefully but one or two or three cases per year are all we usually find and most of these have been from outside Mississippi.

Possibly further studies should be made of the particular organisms reported by the essayist before they are positively identified as dysentery bacilli. There are many intestinal bacteria found in diarrhea, especially in children, that give irregular and confusing sugar fermentation reactions.

Mrs. Mayfield kindly furnished me with her findings as regards fermentation reactions with the various sugars. These do not fit in all particulars with any of the known true dysentery bacilli and agglutination tests with specific sera are negative. Bergey lists an organism which he terms "dysentery-like" which corresponds to the organisms isolated in most respects but not in all.

I understand that further studies are being made. It would be interesting to know something of the toxin production and its effects on animals and whether the serum of the patients will agglutinate the organisms isolated. Such investigations are well worthwhile and will do much to clarify the so-called "bacillary dysentery" situation in Mississippi.

The cultures referred to in this paper as Sonne-like were transferred to beef-extract agar slants and from time to time transferred on this medium from six to ten times over a period of eighteen months. Cultural reactions and agglutination tests were again made. All of the cultures fermented lactose slowly—from seven to fourteen days; but failed to ferment saccharose. Agglutinations in titres from 1:200 to 1:6400 were obtained with all of the cultures, with anti-Sonne Dysentery Serum. The serum used at this time (eighteen months after isolation) was the same serum that the cultures failed to agglutinate when they were freshly isolated. It would appear that some strains of Sonne Dysentery are not agglutinable when freshly isolated. After these cultures are transferred on artificial media several times, they become agglutinable.

319 E. Capitol St.
March 8, 1939.

Coronary Thrombosis, A Condition Constantly Confronting the General Practitioner*

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GREENVILLE, MISS.

In 1934 there were 34,167 deaths in the United States from coronary artery disease—a rate of 27 per 100,000 population. In 1935 there were 40,562 deaths in the United States from coronary artery disease—a rate of 31.8 per 100,000. In the State of Mississippi alone in 1934 there were 136 deaths from this disease, 104 were white and 32 were colored—a rate of 6.4 per 100,000. In 1935 there were 160 deaths in Mississippi of which 127 were white and 33 were colored—a rate of 7.5 per 100,000 population. And in 1936 there were 217 deaths in Mississippi from coronary artery disease, 158 were white and 59 were colored, a rate of 10.1 per 100,000 in Mississippi.

To recapitulate, there was a rate of 27 deaths per 100,000 in the United States from coronary artery disease in 1934 as compared to a rate of 31.8 per 100,000 in 1935. In Mississippi the rate was 6.4 per 100,000 in 1934, 7.5 in 1935, and 10.1 in 1936.

These statistics show definitely, I think, that we are being confronted more each year with this disease. It is interesting to review briefly statistics of other sections of this country which show that the condition is a generalized one.

For instance in California in 1931 there were 1208 deaths from coronary artery disease, each year a definite increase has been noted, and in 1935 there were 3,234 deaths.

In the Middle West, in Illinois, the number of deaths have increased from 625 in 1931 to 2,055 in 1935, and in New York State in 1931 there were 2,171 and in 1935 6,128 deaths from coronary artery disease.

Nearly 2,000,000 people in the United States are suffering from heart disease; and deaths from this cause have taken first rank, 224 per 100,000 population was reported in 1934. The mortality rate in heart disease is more than twice as high as cancer, its nearest rival. Diseases of the coronary arteries today rank eighth in the list of causes of death. Many clinicians have reported the mortality rate from coronary thrombosis as being between 35 and 65%, averaging about 50%. The death rate in the first attack ranges from 16 to 20%, and in the second attack 30%. From these figures it is evident then that if we see 50% die of this disease we see in all at least twice this number suffering from coronary thrombosis.

Wolferth states that coronary occlusion is sometimes discussed as though it were an independent disease entity. He says that it is really a by-product of some pathologic process involving a coronary artery and that most but not all, of the patients who suffer from an acute stormy attack are found to have acute thrombosis superimposed on a gradually developing occlusion resulting from arteriosclerosis.

In 1878 Hammer described a case of coronary occlusion and in 1896 Dock recognized another case and verified it by necropsy. The first detailed report was published by Obratzow and Strackesko in 1910. Herrick reported additional cases in 1912 and brought out points which differentiate coronary thrombosis from angina pectoris. Herrick was the first to note that the disease is not always fatal. Notwithstanding the accuracy of these reports almost ten years elapsed before general interest was aroused in coronary artery disease.

Of 1800 patients with coronary sclerosis treated at the Mayo Clinic, farmers and laborers had the lowest incidence, 2.5% and 2.6% respectively. The incidence in clergymen and lawyers was 4.6% and in bankers 5.3%. Among physicians the incidence was comparatively high—10.7% more than twice that of the next lowest groups. Smith believes that occupation influences the incidence of coronary sclerosis, this incidence being lowest among manual laborers, highest among mental workers and greatest of all among physicians.

At one time it was thought that this was a disease affecting only the fifth and sixth decades of life, but Durant this past year reported seven cases in patients thirty-five years of age or under, observed during the four-year period, 1931-1934—the ages ranged from 22 to 35. Brooks states the disease does occur in children, though rare, and further states that in several instances cases have been reported in infants.

The Metropolitan Life Insurance Company

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*Read before the Section on Medicine at the Seventy-first Annual Session of the Mississippi State Medical Association, Jackson, April 20, 1938.

has shown that the death rate from coronary diseases among the millions in their industrial policy holders in the short space of five years has risen without interruption from 4.7 per 100,000 in 1930 to 22.6 in 1935.

My series of fifty cases of coronary thrombosis, though a comparatively small number, has brought to my attention that coronary thrombosis is a condition confronting us more and more each year and has to be coped with by us general practitioners.

In the analysis of these cases I find that of the fifty, thirty-nine were males and eleven females. The ages ranged from 34 to 72 years. There were six from thirty to forty years of age; sixteen from forty to fifty years of age, and sixteen from fifty to sixty years of age and one seventy-two years of age. There were only three professional men—two doctors and one lawyer, and of the remaining forty-seven, fifteen were farmers. Of these fifty cases, eleven have died. One died a few hours after the attack, six died within a year after the initial attack and four died two years after the initial attack. Of the remaining thirty-nine living cases, fourteen are known to be over fifty per cent disabled and thirteen between ten and fifteen per cent disabled. It has been impossible to contact the remaining twelve.

I would like to show you the electrocardiograms and x-rays of four or five of these cases. My time does not permit showing the entire group.

Case No. 9 of this series C. H. C. Male, W. Age 50, Farmer. Complained of an attack of pain in his heart preceded by unusual exertion of pulling himself up on some shelves. The pain was so severe he stated he broke out into profuse perspiration and though given a hypodermic experienced very little relief. As you will see the electrocardiogram shows a definite thrombosis of the T 3 type indicating a posterior infarct of the left ventricle. The second slide shows an electrocardiogram made one month later in which you can readily see the heart has become quite irregular (there being many ventricular extra systoles.) The third slide shows very much the same as the second. The x-ray of his chest shows a slight enlargement of the left side of his heart.

Case No. 13, L. A. W. Male, W. Age 67, Florist.

This patient was awakened out of sound sleep about midnight with a severe burning sensation in his chest. The electrocardiogram shows the T 3 type. You will notice in the next three electrocardiograms a definite improvement in his condition. Some eighteen months after his initial attack he experienced again a severe burning sensation in his chest with pain radiating down the left arm. Unfortunately an electrocardiogram was not made at this time but four months after this attack you will notice a decided improvement in the electrocardiogram as also in the next one a year later. About two weeks previous to the initial attack this x-ray was made of his chest which shows a sclerotic enlargement of the aorta and no enlargement of the heart.

Case No. 23, L. F. Male, W. Age 72. Farmer.

Complained of pain in his chest for which he had to be given a hypodermic. The electrocardiogram shows the T 3 type, in other words a posterior infarct of the left ventricle. The second slide shows a tracing made thirty-two months later. The x-ray shows a moderate enlargement of the heart and aorta.

Case No. 38, W. E. A. Female, W. Housewife, Age 54.

She gave a history of having had gall bladder trouble and high blood pressure for two or three years. She developed a severe pain in her upper abdomen and following a hypodermic vomited almost constantly for twenty-four hours. A straight film of her abdomen shows gall stones but as you can see her electrocardiogram shows a definite coronary thrombosis T 3 type. This patient was not operated upon.

Case No. 46, J. A. C. Male, W. Farmer, Age 42.

While at church developed severe pain in his chest and collapsed. An electrocardiogram made the first twenty-four hours might be questioned by some but the subsequent ones, I believe, bear out the diagnosis of coronary thrombosis with a posterior infarct. X-ray of chest shows no definite enlargement of the heart.

Case No. 47, J. D. G., Male, W. Salesman. Age 53.

Developed a severe pain in his chest radiating down his left arm for which he was given a hypodermic. These electrocardiograms show a coronary thrombosis with an anterior infarct T 1 type.

The symptoms in these few cases just reported have varied considerably. This brings to one's mind the fact that all cases of coronary thrombosis are not always as typical as frequently described. Thus the finer methods of precision in diagnosing are of inestimable value.

Barnes emphatically states that under proper conditions the presence and situation of acute infarction can be predicted almost always from the electrocardiographic changes that develop.

Coronary thrombosis should be suspected in most cases of acute indigestion, especially in middle aged men.

To summarize—

Statistics show a definite increase in coronary artery disease in the last five years, the incidence among physicians being more than twice that of the next lowest group, although in the author's series farmers outranked all others.

Coronary thrombosis, although most common in the fifth and sixth decades of life, is known to occur in all ages and even in infants.

Report of a series of fifty cases with the presentation of lantern slides of the electrocardiograms and x-rays of six of the series.

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DISCUSSION

Dr. P. W. Rowland (Oxford): Fifty-five years ago, when I was in my swaddling clothes as a member of this Association, a splendid young doctor read a paper on typhoid fever; it was widely discussed and applauded.

An old fellow back in the audience got up and walked up, just as I have done, and faced his audience, erect, like a major general (I can't assume that attitude) and said "you don't know nothing about typhoid fever, you don't know how to treat typhoid fever; I have had two thousand cases of it, and never lost a one."

I sat in awe of the old fellow, but when I sneaked a look over the audience and saw what was happening, I resolved then and there never to shell the woods as that old chap had done.

Now, Doctor Archer, I have not had two thousand cases of coronary thrombosis, and I have lost every one that I ever had.

This subject comes home to me. I have seen many of my dearest friends die from heart disease, and when I say heart disease the implication is "coronary thrombosis," because probably seventy-five per cent of the deaths occurring from heart disease are due to "coronary occlusion." I have lost one of my own sons in the prime of life, so you can understand why I am interested.

Fifty-one years ago in the city of New York, at what was then known as the Northwestern Dispensary, there was at that time, perhaps, the largest heart clinic in the world. It was under the management of Doctor R. C. M. Page, a world authority, at that time, on heart disease. The patients we saw there were stevedores, policemen, cab drivers, street sweepers, push cart peddlers. Dr. Page, discussing the incidence of heart disease, said, "Gentlemen, heart disease is a disease of hard work, hardship and exposure; you do not find it in the higher classes, bankers, lawyers, doctors, business men, the white collar class." I said to him, "Doctor Page, I am afraid I shall not get much out of the discussion, since my patients are nearly all farmers."

Now, I am wondering what has been the cause of the transition in the incidence of heart disease from that group to the present one. Is there a tremendous increase, or, are we more skillful in diagnosis. However, before I sit down, I want to reiterate a fundamental principle, so often neglected, and sometimes entirely forgotten, in the treatment of every sick person, irrespective of diagnosis, age, sex, occupation, or what not. It is particularly applicable to the treatment of heart disease.

It is this. The prime objective, in the treatment of every sick person, is to make him comfortable, contented and confident, under such restrictions as his physician may see fit to impose. When you do this you have accomplished seventy-five per cent of the possible cure of your patient. The other twenty-five per cent you may divide as you see fit, between drugs, and all other measures you may prescribe.

A person with heart disease must be made "heart conscious," otherwise you will never make him comfortable, contented or confident.

Dr. B. B. O'Mara (Biloxi): I feel it a privilege to be allowed to discuss this timely paper that has been presented by Dr. Archer. Certainly there is an increase in the incidence of coronary thrombosis; however, I think the medical profession should take due credit. I believe the figures that he has presented reflect credit on us, for they show that perhaps we are a little bit keener in our diagnostic ability than we previously were.

Dr. Archer has certainly given us something to think about. Speaking of coronary thrombosis, we do not know the exact cause of it, and until we can determine perhaps the cause of the local atheromatosis we will never know the cause of coronary thrombosis. Age seems to be one of the most important and most constant factors in it. The most important age group we know is the patient in the fifth and sixth decade; however, as Dr. Archer has mentioned, we see perhaps numbers of cases sometimes that are earlier than that and some cases in rare instances have been reported in children. Alcohol, food and tobacco are felt to have little significance as to the causative factor of coronary thrombosis.

In a majority of cases there is known and chronic hypertension existing along with it. The symptoms that Dr. Archer has brought out in showing the plates on these cases as he stated, vary considerably.

We are familiar with the robust person who brags about his health at times, but checking back over his history you find that he has had a burning pain at times. It may be epigastric it may be sub-sternal, but it goes on and if you check back you will find this sub-sternal, nagging pain that this person has been conscious of has existed for quite some time, and he has made his own diagnosis of indigestion. We all know a number of cases of coronary thrombosis that terminate fatally have been diagnosed as acute indigestion.

The other symptoms that are produced may vary anywhere from a mild to a severe degree. We are all familiar with the picture of a man with a restless, anxious, expression, ashy gray color, clammy, cold perspiration dripping down from his face and with a fear of impending death. The pain in this condition, as in angina pectoris, may extend down the arm, simulating it very closely. What are we going to do for these patients? The chief thing, the most important thing to my mind, as soon as we see a case, is a masisve dose of morphine. I don't give under half a grain, and in some cases I have repeated that in from 45 minutes to an hour if the proper relief was not given. They must have immediate relief. Morphine, I think, is the best drug to use.

Next and most important is absolute rest in bed, give him sufficient rest. I never let a patient up, with coronary attack, no matter how mild or how severe, under six weeks time, and I go on the old theory that it is better to keep him in bed a month too long than let him up a week too soon.

After we have done that we have not so much else to work on. The theophylline series of drugs under the various trade names are used extensively. Of course, in a heart with fibrillation, and where we have it flip-flopping all over the chest, digitalis is indicated. However, I think it is better to wait until he gets over the initial shock of the acute attack before we attempt to digitalize the patient, but then digitalize him in a hurry if we can. Quinidine sulphate, as we all know, is a very useful drug, straightening out those hearts that have extra systoles, skip beats and that are very irregular. It acts like magic if given in sufficient quantities.

I would like to thank Dr. Archer for his paper and for the privilege of discussing it.

Dr. C. L. Simmons (Hazlehurst): I have found the paper very interesting. The statistical survey furnishes much food for thought. Is the condition increasing as rapidly as these figures would indicate or is our recognition of the condition so much better, that the increase is apparent rather than real? It is also true that since the various communicable diseases are being brought under control, since surgical mortality has lessened, that more individuals survive to experience coronary sclerosis.

The Mississippi figures are especially interesting inasmuch as they show a negro rate about half that of the white. Is this a racial difference, an occupational difference or a matter of recognition? Since the cutters of wood and drawers of water are blessed where coronary disease is concerned and the Mississippi Negro is predominantly a laborer, this difference is perhaps mainly occupational. I notice the large percentage of the essayist's personal cases are farmers. I wonder if he has segregated the figures as to those who labor in the fields and those who are owners, overseers or others working in a supervisory capacity?

As the term "acute indigestion" further fades into well deserved oblivion, the percentage of cases of coronary diseases in Mississippi may be expected to increase.

His patient No. 388 brings up a point to be remembered: "With pain in the heart, look to the belly and with pain in the belly, look to the heart." Gall bladder pain is frequently referred to the heart and vice-versa.

The essayist is to be congratulated on his low mortality, just 22%. This leads me to ask that he give a brief outline of his treatment in the acute case. Does he advocate the use of quinidine routinely or only after fibrillation has developed? What are his views as to the use of vasodilators, so-called, in hypertensive individuals in the hopes of preventing coronary accident? Does he hold with many clinicians that they are available or does he accept the views of the experimental pharmacologist that they cannot be shown to be of value?

As physicians we are vitally concerned about this question from two viewpoints, viz: our patients and ourselves.

A young man just out of medical school has a life expectance of four years less than those of the same age not physicians. Can we, as a group change this? Or will we continue to show this higher percentage due to our work under strain, driving the roads so fast to reach the mother before the baby comes, going to see patients in better health than we are, rather than go to bed at the beginning of the flu, our failures to take vacations lest some old patient may need us and not want to call someone else?

Dr. Archer (closing): In closing may I take this opportunity to thank Dr. Clark for inviting me to appear on this program, and thank Drs. O'Mara, Simmons and Rowland for their discussions.

I wish also to thank the Metropolitan Life Insurance Company of New York, and the U. S. Bureau of the Census for furnishing me the statistics of the mortality rate of coronary artery diseases for the last five years. Last, but not least, I wish to thank Dr. J. A. Beals for preparing the electrocardiogram and x-ray slides I have just shown.

Dr. Rowland mentioned that fifty years ago people died suddenly of heart disease, or something, and the proper diagnosis probably was not made. I am wondering if up until the time we learned about coronary thrombosis, if a great many of those cases that died suddenly and were diagnosed at that time as acute indigestion, if they were not really coronary thrombosis.

Dr. Simmons asked me some questions. I will try to answer a few of them. He asked in regard to the cases of the farmers, whether they were supervisors or owners. Of these fifty cases not a one of them was a Negro, and the farmers were of a supervising capacity, either managers or owners of plantations.

In regard to treatment, certainly rest in bed is important. The general opinion is it should be at least six weeks. The thought is that in that length of time the infarct will heal. Now, of course, a great deal depends upon the size of the vessel occluded, and naturally the size of the infarct. With a small infarct we feel that the patient has a better chance of recovery, but these patients must be kept in bed until the infarct is entirely healed.

In regard to vasodilators, I believe in them because the patients to whom I have given these drugs seem to have gotten a great deal of relief and I believe vasodilators generally help. If we have a patient who is getting definite relief we can feel that there is some virtue in the drug.

The commonest complication of coronary thrombosis is the occurrence of emboli from the inner surface of the cardiac infarct where the damaged endocardium becomes the seat of a mural thrombus.

Congestive heart failure is another very common complication and is the one instance in coronary thrombosis in which all authorities agree that digitalis is indicated.

Multiple attacks of coronary thrombosis are common although this has happened in only one of my cases.

Patients with posterior infarct have a better prognosis than those with an anterior infarct.

Mississippi State Medical Association

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G. S. Bryan, Amory .... Associate Editor
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Papers and news material for publication should be received not later than the fifth of the month preceding publication.

The editors are not responsible for statements made by any contributor.

Manuscripts and all material for publication should be addressed to the editor, P. O. Drawer 231, Vicksburg, Mississippi.

EDITORIALS

NEED OF CO-ORDINATION

For the year of 1937, it was reported that 3,722 persons died in Mississippi without medical attention. On July 1, 1938, the State Hospital Commission turned back to the state unused funds appropriated for the hospitalization of charity patients in the biennium July 1, 1936 to June 30, 1938, amounting to $79,835.71. This was $21.45 for each person dying without medical attention.

The funds for the hospitalization of charity patients are allotted by counties and some counties used all of their allotments so that further funds were not available. However, some part of the allotments for 51 counties reverted to the state unused.

While it is certain no member of the Mississippi State Medical Association would have refused to attend a patient in his last hour had he been called, and while there are still people who do not believe in doctors and would not call them under any circumstances, still in the minds of some who may not understand, the fact that 3,722 persons died without medical attention in one year cannot but suggest criticism of the profession.

Some of the criticism may be averted if physicians will remember that hospitalization is available for charity patients at state expense and will refer patients in need for hospital care. This does not mean at all that funds are sufficient to hospitalize all persons who might be better off in a hospital than at home. It does mean that there are funds to care for emergency cases if used for those actually in need.

A report is sent by the State Hospital Commission to each of the 54 approved hospitals each month showing the standing of allotments to each county and the amount of money available for charity hospitalization. This information may be obtained from any of these hospitals by any doctor of the state or the Commission will furnsih such information if requested.

The counties not using the funds allotted for the hospitalization of charity patients during the biennium of 1936 to 1938 and the amounts of money turned back to the state for each are as follows:

Amite, $53.26; Attala, $4,582.28; Benton, $224.82; Chickasaw, $107.10; Choctaw, $8.16; Claiborne, $2,962.80; Clarke, $4,797.60; Clay, $1,144.10; Copiah $4,577.60; Covington $226.34; DeSoto, $4,234.34; Forrest, $7.08; Franklin, $1,620.88; George, $1,111.58; Greene $1,967.62; Holmes, $1,922.30; Humphreys, $916.53; Issaquena, $548.00; Itawamba, $2,010.86; Jasper, $3,170.46; Jefferson, $3,459.08; Kemper, $679.72; Lafayette, $400.30; Lamar, $195.74; Leake, $4,493.02; Lee, $180.02; Lowndes, $4,621.38; Madison, $2,205.12; Marion, $9.76; Marshall, $385.62; Neshoba, $3,264.86; Noxubee, $6.60; Oktibbeha, $284.28; Panola, $604.48; Perry, $628.48; Pike, $465.64; Prentiss, $778.80; Quitman, $2,396.70; Rankin, $3,332.96; Scott, $2,556.30; Simpson, $27.22; Smith, $129.78; Stone, $10.56; Tippah, $503.96; Tishomingo, $285.54; Tunica, $1,391.64; Washington, $301.04; Wayne, $3,718.88; Webster, $119.30; Winston, $828.24; Yazoo, $5,296.98.

The proper use of state funds can materially reduce the number of persons in Mississippi dying without medical care.

NON-PROFIT HOSPITAL PLANS INCREASING

It has been announced by Dr. Rufus Rorem of the American Hospital Association that nearly a million and a half new subscribers enrolled in the fifty-three non-profit hospital service plans during 1938. Total subscribers neared the three million mark on January 1, 1939, compared with almost 1,400,000 on January 1, 1938.

Non-profit hospital service plans were started in 16 additional places during the past year. They were Atlanta, Los Angeles, Decatur and Alton, Ill., Newark, Canton, Toledo and Youngstown, Ohio; Harrisburg, Pittsburg and Philadelphia, Pa.; Denver, Louisville and Covington, Ky.; Danbury, Conn., and a state-wide plan in Mississippi.

The largest growth during the year was in New York City where the plan doubled its enrollment to reach 1,100,000 employed subscribers and dependents.

Others having more than 100,000 total enrollments were:

Minnesota (state-wide), 245,000; Cleveland, 154,000; Boston, 116,000; New Jersey (statewide), 112,000; Rochester, N. Y., 109,000.

Among cities with more than 50,000 members were Chicago, 85,000; Syracuse, N. Y., 67,000; St. Louis, 51,000; Buffalo, 50000 and Washington, D. C., 50,000.

MISSISSIPPI STATE BOARD OF HEALTH

Physicians of the Gulf Coast Medical Society tendered a birthday testimonial dinner to Dr. D. J. Williams, director of the Harrison County Health Department, in Gulfport, February 1. The Harrison County Health Department is the oldest in the South, and Doctor Williams became its director in 1915. Physicians from all over the state attended the celebration, indicating the close working co-operation between the private practitioner and the public health officer in Mississippi.

* * *

Three Mississippi physicians were granted one month's study at Vanderbilt Veneral Disease Clinic from February 20 to March 18. They were Dr. B. H. Higdon, Sunflower; Dr. R. H.. Bostick, Jr., Indianola, and Dr. C. H. Ingram, Pickens.

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"Public Health Implications on the Control of Syphilis" by Dr. Joseph Earl Moore of Baltimore, and "New and Standard Practices in the Management of Syphilis" by Dr. E. Gurney Clark of Nashville were mailed by the Division of Preventable Disease Control to Mississippi physicians during February. These booklets contain latest and best information on syphilis control.

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H. A. Kroeze, director of Sanitary Engineering, will address the first annual meeting of the Louisiana Public Health Workers Association convening in New Orleans, March 29-31. Subject of Mr. Kroeze's address will be "A Basic Program of Sanitation."

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Dr. R. N. Whitfield, director of Vital Statistics, attended a two-day annual conference on medical licensure in Chicago, February 13-14, relative to requirements and problems of licensure. Doctor Whitfield is the state registrar for medical licenses in Mississippi. Subjects discussed by the conference included the question of licensing refugee physicians from Europe and certain changes in medical education and licensure.

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Dr. Felix J. Underwood has accepted invitations to become a member of two different national committees whereby he can further the public health interests of Mississippi. As a member of the planning committee of the Conference on Children in a Democracy, he will assist in organizing and directing this group. Secretary of Labor Frances Perkins, is chairman of this committee, and Miss Katherine F. Lenroot, chief of the Federal Children's Bureau, is secretary. Doctor Underwood's second new appointment is as a member of the advisory committee of the national Organization for Public Health Nursing for which W. G. Smillie, New York, is chairman.

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In the capacity of president of the State and Provincial Health Authorities of North America, Doctor Underwood was called to Washington to testify February 2 before the Subcommittee of Treasury and Post Office of the House Appropriations Committee relative to the need for increased appropriations for venereal disease control. Dr. Underwood presented figures on the number of syphilis and gonorrhea cases in Mississippi and other states of the Union and in the Territories. An increased appropriation bill has passed the House since that time. The Senate Subcommittee on Treasury and Post Office is being asked to allow a hearing.

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Doctor Underwood attended the annual meeting of the American Social Hygiene Association in Washington concerning the program for 1939. At this meeting the Williams Freeman Snow award for outstanding service in humanity was made to Dr. Thomas Parran, Surgeon General of the United States.

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The medical library of the State Board of Health grows more complete and more valuable as time goes on with the addition of personal medical libraries.

Recent gifts to the library was a collection of medical books and journals belonging to the late Dr. I. W. Cooper of Meridian, who had requested especially that they be donated to the State Board of Health. A bookplate will be placed in each of them in his memory.

The library has received also from Mrs. L. D. Pepper of Lexington the books and journals of the late Dr. A. J. Newman of Newton.

Such generous assistance is a valued and appreciated factor in constantly improving library facilities.

* * *

Commonwealth Fund officials from New York conferred wth staff members of the State Board of Health during the week of February 13, relative to Commonwealth participation in Mississippi's public health program. The group included Mr. Barry C. Smith, director; Miss Barbara Quin, assistant director; and Dr. Clarence L. Scamman, director of public health activities of the Fund who with Doctor Underwood visited in Jones County where the

Fund aids in conducting a super health department.

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Miss Ella Ketchin, consultant for the Federal Children's Bureau, Washington spent several days during February in Mississippi conferring with health and education authorities about minors in industry.

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Miss Ruth Cushman, regional consultant in nursing for the U. S. Public Health Service, New Orleans, spent several days in Mississippi, meeting with local nurses in Pike and Lauderdale counties with Dr. Felix J. Underwood, J. B. Wheeler, director of Civilian Rehabilitation, and Mrs. J. F. McDougal, supervisor of Crippled Children's Service in Jackson.

* * *

Phenomenal accomplishments in sanitation through WPA funds were discussed at Staff Conference, February 11, conducted by H. A. Kroeze, director of Sanitary Engineering. Federal aid has accomplished in five years what would have required fifty at the old rate, Mr. Kroeze said. Malaria drainage and construction of sanitary privies comprise the greater part of WPA sanitation work. Appearing on the program was Major George Parker, assistant administrator, Works Progress Administration, who stated that 12 per cent of WPA workers in Mississippi are employed on sanitation projects. Other speakers were Nelson H. Rector, assistant state director of malaria control, and Floyd Ratliff, assistant state director of sanitation.

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Dr. J. W. Dugger, director of Industrial Hygiene, conducted Staff Conference on February 25, his subject being "Recent Activities of the Industrial Hygiene Program with Special Reference to Work in Amite County."

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On February 13, Doctor Underwood addressed a Parent-Teacher Association meeting at Culkin Academy, Vicksburg, on "Public Health Program in Warren County and Mississippi."

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Visitors to the State Board of Health during February included W. H. Lackey, U. S. Bureau of Census, Washington, and Dr. Gertrude Sturges, consultant on Medical Care, American Public Welfare Association, Chicago.

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On the State Board of Health program over WJDX, broadcast at 9:30 each Saturday morning, the following speakers appeared during February.

February 4—Mrs. Luther Manship, president, Hinds County Social Hygiene Association, Jackson, and Dr. D. V. Galloway, supervisor, Venereal Disease Control, State Board of Health, Jackson—"The Homemaker Asks the Doctor."

February 11—Dr. Felix J. Underwood, executive officer, State Board of Health, Jackson—"Dangerous Drugs."

February 18—Dr. Felix J. Underwood, executive officer, State Board of Health, Jackson—"The Common Cold."

February 25—Dr. Henry Boswell, superintendent, Mississippi State Sanatorium, Sanatorium—"Tuberculosis."

Jackson,
March 4, 1939.

Felix J. Underwood,
Executive Officer.

PROPOSED LEGISLATION

(From the LEGISLATIVE BULLETIN, No. 80, of the American Hospital Association, February 8, 1939.)

UNITED STATES CONGRESS

S. 107—Federal Securities Taxation. To make income from United States securities subject to the income-tax laws of the United States.

H. J. Res. 49—Income Tax Amendment. Proposing an amendment to the Constitution of the United States to enable the United States to lay and collect a tax on income derived from securities issued and paid by any state, and to enable each state to lay and collect taxes on income derived by residents from securities issued and paid under authority of the United States.

STATE LEGISLATURES

ALABAMA

H. 56—Health. Providing funds for the maintenance and operation in each county of a full-time county health department under the direction of the county board of health and county health officer, and subject to the supervision and control of the State Board of Health.

ARIZONA

H. 155 — Public Health. Further protecting the public health by providing state aid to counties for the construction or expansion of hospitals and sanatoria for the treatment of tuberculosis.

H. 7 — Sales Tax. Amends the sales tax to exempt household foods, wool and cotton garments, and medicines but not liquor and beverages.

H. 45 — Wages. Requires all employers to pay wages twice monthly and sets up regulations for paydays.

ARKANSAS

S. 77. Medical Care. To reduce the high cost of medical care, to prescribe certain regulations for hospitals, to fix maximum fees that may be charged, to permit the physician of patients choice to serve such patients in any hospital, and to make graduates of accredited high schools eligible to attend medical colleges.

S. C. R. 6. — Free Hospitalization Funds. For appointment of committee of two from Senate; three from House, to make inquiry into exhaustion of funds for free hospitalization and medical care for indigent sick to determine what steps shoud be taken to alleviate condition.

CALIFORNIA

A. 10 — Medicines. Exempts medicines from sales tax.

A. 11. — Medicines. Exempts medicines from use tax.

A. 1248. — Wages for Women. Increase minimum wages for women from $16 to $20 weekly.

A. 2385. — Private Hospital Inspection. Provides for inspection for private hospitals and invalid homes.

COLORADO

H.602. — Radio Interference. — Prohibits the installation, maintenance or operation or use of any electrical or mechanical devices or instruments or facilities which generate, or create electrical interference with radio reception.

H. 995. — Tax Supported Hospitals. A bill for an act relating to tax supported hospitals and public health services and preventing discrimination as to services of doctors of medicine and doctors of chiropractice to inmates and public charges.

H. 1005. — Public Health. A bill for an act relating to public health, and providing that surgical extirpated parts of human beings must be preserved and forwarded to the state board of health for pathological examination and analysis, and providing penalties for the violation thereof.

CONNECTICUT

H. 1469. — Antitoxin. Distribution. Providing for the distribution of antitoxin at cost to towns, cities and boroughs and in case of emergency, free, upon approval by the governor.

ILLINOIS

H. 110. Hospital License. Licenses private hospitals, nursing homes, resting homes, and sanitaria.

S. 52. — Medical Liens. Provides for liens for dental, medical, and surgical treatment of injured persons.

INDIANA

H. 37. Serum Distribution. — An act authorizing state health department to spend $75,000.00 for distribution of pneumonia, diphtheria, typhoid, and smallpox serums.

H. 174. — Indigents' Medical Care. An act providing medical, surgical, and hospital care for indigent persons over sixteen; one year residence requirement; expenses borne by county.

H. 224. — Hospital Liens. An act permitting hospitals to file liens on damages which patients collect.

MASSACHUSETTS

H. 852—Licensing of Hospitals, Etc. Requiring licensing of hospitals, convalescent homes and nursing homes.

MINNESOTA

H. 49 (Same as S. 68.)—Municipal Hospitals. Providing for establishment and maintenance of municipal hospitals in certain cities of 5,000 to 50,000 population; providing for special elections for issuance of bonds; providing for tax levies in excess of present limitations.

MISSOURI

S. 22—Hospitals' Liens. Providing that public or private clinics and hospitals supported in whole or part by charity or the state shall have a lien upon the claims, suits, rights or actions, etc., of anyone admitted to the hospital.

MONTANA

CCH H. 1379—Pneumonia Control. Serum Provides for pneumonia control and distribution of serum.

NEW HAMPSHIRE

H. 25.—Labor. Prohibiting night work for women and minors.

NEW JERSEY

S. 61.—Pneumonia Serum. Appropriating $25,000 for the purchase of pneumonia serum.

NEW MEXICO

S. 48—Barbers. Prohibiting barbers charging more for hospital patients than shop customers.

NEW YORK

A. 130—Indigent Persons. Authorizes municipalities to appoint qualified physicians from list of volunteers listed with health department, at annual compensation not to exceed $750, for medical care of indigent persons.

A. 175 (Same as S. 130). Infantile Paralysis.. Required every health officer to exercise proper and vigilant medical inspection of persons 21 years or over infected with poliomyelitis and to provide at remedial stages of disease suitable surgical, medical or other treatment or hospital care and necessary appliances for persons so infected who cannot otherwise be provided for; one-half of cost to be charged against county or New York City and one-half to be paid by state; appropriates $30,000

A. 269—Hospital Records. Evidence. Provides that records of hospital certified by officer in charge may be read in evidence in any court and shall prima facie evidence of facts and circumstances stated therein, declarations of non-medical nature not, however, being admissable.

A. 413—Physicians Right of Lien. Gives physicians right of lien for aid, treatment. care or services on account of personal injuries resulting from negligence of another, except where settlement or verdict is less than $300.

A. 569—Non-profit Health Service. Provides for incorporation of nonprofit health service membership corporations, instead of hospital service, to contract with physicians, dentists or other persons for general medical service to its members and to include present provisions relating to hospital service; permits such corporations to act as reinsurers if organized to serve a community of more than 1,000,000; requires corporations service small communities to reinsure certain percentages of contracts.

NORTH CAROLINA

H. 63.—Liens. Medical Hospitals. An act to license, inspect, supervise and regulate maternity homes and hospitals or institutions with maternity beds.

OHIO

H. 11—Retail Sales Tax. An act to remove medicine, all foods, clothing and fuel for home consumption from retail sales tax.

H. 171—Compulsory Health Insurance. An act to establish a nine-member board to serve without pay, to investigate, study and recommend legislation in reference to group medical and compulsory health insurance.

OKLAHOMA

H. 76 and S. 17—Free Medical Treatment. An act providing free medical treatment for indigents.

H. 103—Hospital Practice. An act providing that any licensed surgeon or physician shall have the right to practice in any public or private hospital.

SOUTH DAKOTA

H. 47—Right to Choose Doctor. Gives right to clients to choose doctors where public funds are used. Referred to the Committee on Public Health, January 20, 1939.

S. 25—Liens. Provides that any person rendering personal service shall have a lien upon property, real or personal.

TEXAS

H. 144—Destitute Sick. An act to provide for the creation of a department of hospitalization and medical care to provide hospitalization for indigent and destitute sick persons.

H. 176—Hospitals. An act to create a board to license and regulate all hospitals, sanitariums and infirmaries.

S. 80—Pneumonia. Appropriation to State Health Department for eradication of pneumonia.

UTAH

S. 85—Maternity Hospitals. A bill licensing maternity hospitals and homes and providing for their supervision and inspection by the state board of health.

VERMONT

H. 56—Health. Establishing a state cancer commission; appropriating $35,000 next biennium.

WASHINGTON

S. 114—Study of Buerger's Disease. An act to provide for the establishment of a public institution for treating Buerger's disease and for the study of medicinal and curative properties of Soap Lake, and carrying an appropriation of $102,600.

WEST VIRGINIA

H. 156—Physician's Testimony. Disqualifying physician's testimony about infection given them by patients.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the

MISSISSIPPI STATE MEDICAL ASSOCIATION: Seventy-Second Annual Session and Thirty-Sixth Annual Session of the House of Delegates, Gulfport, May 9, 10, 11, 1939.

Adams County Medical Society: James C. Rice, Natchez, president; Fred Geisenberger, Natchez, secretary. Meets third Tuesday, each month, Natchez, 7:30 p. m.

Amite County Medical Society: W. S. Stewart, Oskya, president; D. H. Thornhill, Crosby, secretary. Meets second Thursday, each month with Wilkinson County Medical Society, Field Memorial Hospital, Centreville.

Central Medical Society: J. T. Rainer, Yazoo City, president; Lawrence W. Long, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. D. House, Sledge, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand. Shubuta, secretary.

Coahoma County Medical Society: William P. Warfield, Clarksdale, president; N. C. Knight Clarksdale, secretary. Meets second Wednesday each month, Alcazar Hotel, Clarksdale. 12 noon.

Coast Counties Medical Society: F. O Schmide, Ocean Springs, president; D. L. Hollis, Biloxi, secretary.

Delta Medical Society: G. Y. Gillespie, Greenwood, president; W. W. Hall, Shelby, J. W. Barkley, Belzoni, J. C. Adams, Greenwood, U. S. Wasson, Moorhead, vice-presidents; F. M. Acree, Greenville, secretary-treasurer; B. H. Higdon, Sunflower, president-elect. Meets second Wednesday in April and October, 2 p. m. Rotates through five counties.

DeSoto County Medical Society: President, Dr. Henry M. Wadsworth, Hernando.

East Mississippi Medical Society: C. H. Harrison, Philadelphia, president; Bob A. Cameron, Meridian, secretary.

Franklin County Medical Society: C. A. Everett, Bude, president; L. Costley, Meadville. secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: Dr. Walter E. Johnston, Vicksburg, president; Dr. Alston Callahan, Vicksburg secretary.

Marshall County Medical Society: C. R. Senter, Byhalia, president, Herbert Phillips, Holly Springs, secretary. Meets second Thursday each month, alternating between Byhalia and Holly Springs.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary.

North Mississippi Medical Society: C. M. Speck, New Albany, president; S. E. Eason, New Albany, vice-president; A. H. Little, Oxford, secretary. Meets third Wednesdays of January, April, July and October, unless otherwise designated. Place of meeting: Varies.

Northeast Mississippi Thirteen-County Medical Society: Dr. R. J. Brown, Iuka, president; A. J. Stacy, Tupelo, secretary. Meets second Tuesday, March, June, September, December.

Pike County Medical Society: E. M. Givens, McComb, president; T. Paul Haney, Jr., McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: J. H. Windham, Ecru, president; Eliam B. Burns, Ecru, secretary. Meets first Tuesday each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Sunflower County Medical Society: U. S. Wasson, Moorhead, president; H. B. Cottrell, Indianola, secretary.

Tallahatchie County Medical Society: G. Lacy Biles, Sumner, president; G. D. Hightower, Webb, vice president; J. E. Powell, Charleston, secretary.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: (Copiah-Lawrence-Lincoln-Walthal), R. S. Savage, Brookhaven, president; R. B. Zeller, Hazlehurst, secretary. Meetings for 1930: Wesson, March 14th, 12:15 p. m.; Tylertown, June 13th, 12:-15 p. m.; Monticello, Sept. 12th, 12:15 p. m.; Brookhaven, Dec. 12th, 12:15 p. m.

Webster County Medical Society: E. F. Arnold, Bellefontaine, president H. K. Curry, Eupora, secretary.

Wilkinson County Medical Society: C. L. Catchings, Woodville, president; E. M. Butler, Centreville, secretary. Meets second Thursday, each month, with Amite County Medical Society, Centreville.

Winona District Medical Society: T. J. Brown, Grenada, president; S. B. Caruthers, Grenada, secretary.

CENTRAL MEDICAL SOCIETY

The regular monthly meeting of the Central Medical Society was held at Convention Hall, Robert E. Lee Hotel, Jackson, Tuesday, March 7, with dinner at 6:30 p. m.

The program included the following:

1. Cancer with Special Emphasis on Numerical Grading—Dr. A. C. Broders, Mayo Clinic, Rochester, Minnesota.
2. Surgical Treatment of Hypertension with a Summary of Medical Treatment—Dr. Winchell McCraig, Mayo Clinic, Rochester, Minn.
3. Chronic Ulcerative Colitis—Dr. L. S. Meriweather, Mayo Clinic, Rochester, Minn.

A pleasing feature in connection with this meeting was the luncheon in honor of the visitors from the Mayo Clinic given by Doctors H. R. Shands, Frank Hagaman, and R. C. O'Ferrall at 12:30 p. m. on the roof of the Heidelberg Hotel. At that time Dr. Craig addressed the gathering on 'Protruded Intervertebral Disks as a Cause of Low Back and Sciatic Pain."

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CLARKSDALE AND SIX-COUNTY MEDICAL SOCIETY

The seventy-fourth semi-annual session of the Clarksdale and Six-County Medical Society was held at the American Legion Hut, Clarksdale, Wednesday, March 22, beginning at 2:00 p. m. and at the Alcazar Hotel, beginning at 7:00

p. m. The program as announced by the secretary, Dr. E. LeRoy Wilkins, Clarksdale, included the following:

2:00 p. m.—American Legion Hut.
Call to order—Reading of Minutes.
Secretary's Financial Report.
New Business.
Old Business.

Program Sponsored by the Tulane University of Louisiana Medical Dept.

1. Diagnosis and Treatment of Gonorrhea in the Male—Edgar Burns.
2. Urinary Calculi—W. E. Kittredge
3. Intra-abdominal Complications of Acute Appendicitis—Mims Gage.

Hematuria—John G. Menville.

5. Gonorrhea in the Female — E. Perry Thomas.

Recess
Alcazar Hotel—7:00 p. m.
Banquet
Election of Delegates for 1939.

6. Urinary Infections: A Review of Drugs Used, With Emphasis of Sulfanilamide Therapy—Edgar Burns.
7. Infections of the Hand—I. Mims Gage.

Clarksdale,
March 14, 1939.

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COAHOMA COUNTY MEDICAL SOCIETY AND CLARKSDALE HOSPITAL MEDICAL STAFF

The meeting was called to order in the Alcazar Coffee Shop immediately after lunch, March 8, 1939. Minutes of the previous meeting were read. Dr. W. H. Brandon presented a petition for Dr. A. J. Brown in his absence in reference to having the society members sign this petition in order to install physiotherapy in the Clarksdale Hospital. This was discussed by Drs. Wilkins, Barrett, Hughes, Dye, and Levy. Dr. Hughes then made a motion against having physiotherapy in the Clarksdale Hospital as suggested in the petition. This was seconded by Dr. Barrett.

The society then made a motion to have a motion picture film at our next meeting in April.

There being no further business, the society adjourned.

Julius Levy, Secretary.

ISSAQUENA-SHARKEY-WARREN COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Issaquena-Sharkey-Warren-County Medical Society was held at the Mississippi State Charity Hospital Tuesday, March 14, with a supper served at 7:00 p. m. The program included:

Amebic Dysentery—Dr. G. W. Gaines, Tallulah, Louisiana—Discussed by Drs. G. M. Street and H. S. Provine.

Brandl's Ring and Stricture of the Uterus—Dr. Henry Goodman, Anguilla—Discussed by Drs. J. A. Birchett, Jr., and F. M. Smith.

Report of the Issaquena-Sharkey-Warren-County Medical Society Clinic.

Case Report — Mississippi State Charity Hospital staff.

The last meeting was distinguished by some unusually notable case reports. Dr. Sydney Johnston and Dr Lawrence Clark vied with each other in presenting cases which had been successfully treated with nicotinic acid. It was the consensus of opinion that Dr. Johnston's cases, if authenic, were more exceptional.

The program of radio talks to be given by members of the society in the second quarter of the year were announced as follows:

April 5 —"Are You Heir Conditioned?" (What to do in preparation for the baby, both financially and etc.)—A. J. Messina.

April 12—"Goiter" (The different types of goiter, what to do for them, common fallacies known regarding them)—B. B. Martin, Jr.

April 19—"A Touch of Indigestion" (Folly of taking soda, etc., when possibly ulcer or cancer of stomach.)—W. H. Parsons.

April 26—"Whooping Cough" (Precaution to take, seriousness of condition, etc.)—D. A. Pettit.

May 3—"Only a Headache" (Different possibilities that cause a headache, erroneousness of taking headache powders, etc.)—W. C. Pool.

May 10—"Why Does My Back Ache?" (Various causes and treatment of backache). — Henry Provine.

May 177. — "Sidewalk Clinics" (Inadvisability of stopping people on street, whether doctors or laymen, to ask about condition or prescriptions).—W. K. Purks.

May 24—"Baby Has a Convulsion" (Various things a mother should do for child until doctor comes).—Pierce Robert.

May 31—"Is It Just Sores or Syphilis?" ("Importance of Differentiating).—Guy Sanderson.

June 7—"A Consumptive in the Home."—F. M. Smith.

June 14.—"The Needed Equipment of A Country Doctor" (Embracing actual instruments, diagnosis, treatment, he is called on to make).—W. A. Smith.

June 21—"Just a Stray Dog" (Rabies).—B. A. Stafford.

June 28—"A Lump in the Breast" (Problem of cancer).—A Street.

The next meeting of the Society will be held

Tuesday, April 11.

Alston, Callahan,
Secretary.

Vicksburg,
March 14, 1939.

* * *

ISSAQUENA-SHARKEY-WARREN-COUNTY MEDICAL SOCIETY CLINIC

The report of the director of the Issaquena-Sharkey-Warren-County Medical Society Clinic, Dr. Edley H. Jones, for the month of February showed a total of 525 patients treated of which 250 were new patients. There was a total of 1,293 patient visits during the month, or a daily average of 46. These included 225 white male; 255 white female; 262 colored male, and 451 colored female. They were divided by services as medical, 100; surgical 106; obstetrical, 30; gynecological, 103; eye, ear, nose and throat, 110; orthopedic, 12; pediatric, 20; genito-urinary, 650 of which 626 were venereal. One hundred and sixty-two clinic patients were admitted to the hospital.

The clinic served patients from 18 counties of the state and seven patients from other states.

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TRI-COUNTY MEDICAL SOCIETY

The quarterly meeting of the Tri-County Medical Society was held at the Co-Lin Junior College, Wesson, Tuesday, March 14. The program, as announced by Dr. R. B. Zeller, secretary, included the following:

Dinner—12:15 p. m.

A Critical Analysis of 150 Consecutive Obstetrical Deliveries—J. A. Atkinson, Brookhaven.

Common Injuries of the Eye—A. G. Wilde, Jackson.

Clinical Application of the Synthetic Male Hormone from the Surgical Viewpoint—Lawrence W. Long, Jackson.

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IN MEMORIAM

R. E. Sylverstein	January 2
D. W. Magee	February 12

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COMING MEETINGS

Tylertown	June 13
Monticello	September 12
Brookhaven	December 12

Hazlehurst,
March 3, 1939.

DESOTO COUNTY

The physicians of this county were the guests of the newly organized County Board of Health at a six o'clock dinner at the Spencer House, Hernando. A representative number was present. Dr. A. L. Gray, Jackson, chief of the Division of Preventable Disease Control, was the principal speaker. He was introduced by the county health officer, Dr. J. W. Evans, who aptly spoke of the proposed work of the department particularly of the syphilitic problem. Dr. Gray's remarks were well chosen and his hearers knew that he was well versed and well equipped for his work. We think that the Mississippi State Board of Health is pursuing the right course in enlisting the physicians' aid in their various campaigns for better health in the state.

A new synthetic preparation, the hydrochloride of diphenylacetyldiethylaminoethanol should assure cure for some ailment, we trust the period of recovery will not be as long as the name thereof.

The first hospital in America was erected before 1524 in the City of Mexico by Cortez of Spain. It is still in existence.

The first hospital in the United States was erected on Manhattan Island about 1663 "at the request of Surgeon Hendricksen Varrevanger for the reception of sick soldiers who had been previously billeted on private families, and for the West India Company's negroes."

Dr. and Mrs. J. A. Rhodes, Horn Lake, recently visited in Oxford where their daughter, Ruth, and her family reside. The Rhodes are justly proud of their grandchildren.

Dr. and Mrs. L. W. Dotson, West Point, were in Hernando recently with the C. W. Emersons and children. Mrs. Emerson is their daughter. Here also are some fine grandchildren and appreciated by all.

* * *

Dr. Charles Morgan Hammond, Walls, had his respirator on exhibition at the Tri-State Fair and the Mid-South Medical Assembly where it elicited much favorable comment. He has just completed a 36-pound respirator for the newborn, a machine he believes will materially decrease the death rate of children at birth. Dr. Hammond's autobiography appeared in this column in the last November issue. He has been working on this apparatus since 1903. The physicians and hospitals of Memphis speak most enthusiastically of this wonderful and worthwhile machine. He is still working on and perfecting his larger machine which is valuable in the treatment of pneumonia. I was in school with Dr. Hammond and have known him intimately throughout the years and his friends are delighted to know that he is about to reap the rewards of years of hard and continued labor.

This is the way physicians mend or end us
Secundum artem, but although we sneer
In health, when ill, we call them to attend us
Without the least propensity to jeer.—Byron.

The time is drawing near for the annual meeting at Gulfport of the Mississippi State Medical Association. The coast is a delightful place to visit and we are looking forward pleasurably to this gathering.

We expect the second councilor district to make a good report. We have nothing but commendation for secretary A. H. Little of the North Mississippi Medical Society; secretary J. S. Eason of the Tate County Society always reports a 100% membership; this county will have 90% plus membership, since only one physician is not a member.

In reference to our old time friend, Dr. J. Sidney Eason, Coldwater, who is preparing to move to Loganport, La., Dr. Eason has been secretary of his local medical unit, county health officer, local surgeon for the I. C. R. R. and variously interested in affairs of church and state will be sorely missed. We wish him much success in his new field of endeavor. And as heretofore stated, for years he has had a 100% membership in his county society. Few organizations have this record.

L. L. Minor,
County editor.

Memphis, Tenn,
Rt. 4,
March 13, 1939.

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LEFLORE COUNTY

Dr. and Mrs. R. M. Flynt, Newton, announce the birth of a son, at the Newton Infirmary, Feb. 9. Mrs. Flynt was Miss Elaine Russell of Schlater, this county.

Drs. I. B. Bright, C. Y. Gillespie, Jr., J. F. Lucas, L. B. Otken and J. C. Pegues attended the meeting in Memphis, February 14-17, of the Mid-South Postgraduate Medical Assembly.

Dr. and Mrs. W. B. Dickins and daughter, Marion, spent the week-end of Feb 18-19 in Memphis visiting in the home of Mr. and Mrs. Pope McCorkle.

Dr. W. H. Frizell, Brookhaven, spent the week-end of Feb. 18 to 20 in Greenwood, to welcome his new granddaughter, Edna Elizabeth McShane, born to Mr. and Mrs. H. P. McShane at the Greenwood-Leflore Hospital, February 6.

Dr. and Mrs. W. M. Merritt, Boyle, were recent visitors to relatives in Greenwood.

Greenwood, W. B. Dickins,
March 1, 1939. County Editor

INTERPRETING MEDICAL LITERATURE STAFF OF REVIEW

Eye, Ear, Nose and Throat—Alston Callahan, Vicksburg.
Obstetrics and Gynecology—J. W. Lucas, Greenwood.
Orthopedics—Thomas H. Blake, Jackson.
Pathology and Clinical Pathology —E. T. White, Greenville.
Pediatrics—Harvey F. Garrison, Jackson.
Public Health —Felix J. Underwood, Jackson.
Radiology and Roentgenology— Karl O. Stingily, Meridian.
Urology—Temple Ainsworth, Jackson.

Comments and discussions are invited.

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RADIOLOGY AND ROENTGENOLOGY

Karl O. Stingily, Meridian

EVALUATION OF OVARIAN STERILIZATION FOR BREAST CANCER, Grantley Walder Taylor, Surg. Gynec. & Obstet. 68-452 (February) 1939.—In a series of 50 additional cases of irradiation to ovaries in inoperable carcinoma of the breast the author has shown about one-third regressions or improvements. Those cases which respond more readily are those with bony metastasis. Practically no benefit is derived in lung, liver and brain metastases. Because of the short time this procedure has been carried out and the absence of statistics no value can be attached to pre-radiation in all breast malignancies in young women, but this author seems to feel it would be beneficial.

COMMENT:

It has been my policy in the past few years to irradiate ovaries in cases of metastatic tumors of the ovaries I believe in the majority of those cases where we have irradiated the ovaries we have seen definite good and the patients have had less suffering. I have also pushed pre-radiation to the ovaries in all cases of breast cancer in young women and feel our mortality will be considerably reduced.

March 9, 1939.

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GYNECOLOGY AND OBSTETRICS

J. F. Lucas, Greenwood

WERTHEIM OPERATION FOR CANCER OF THE UTERUS, Paul Werner, Surg., Gynec. & Obstet. 68:486, 1939.—

The author limits his remarks to a discussion of the measures designed to reduce the high mortality rate resulting from the high incidence of postoperative peritonitis following the Wertheim operation. Despite the fact that this operation fulfills the requirements for successful removal of the uterus for cancer of the cervix, he is obliged to admit that this operation has been to a large extent discarded in the past few years by many surgeons in favor of other operative or non-operative measures due to fear of the attending high mortality, which varies from 10 to 20% and even to 30% in those cases where the streptococcus hemolyticus could be recovered from the ulcer. The postoperative deaths due largely to peritonitis are easily understood as the carcinoma is invariably associated with various pathogenic organisms, so that the operation of necessity is performed in a septic field.

His method to avoid postoperative peritonitis is based upon the following points: (1) The anesthetic: the entire field of operation is considered potentially infected. To prevent repeated protrusion of the bowels and the forced reposition with associated injury to serosa and separation of the posterior vaginal wall from the rectum, which is especially painful and prompts the patient to bear down even under deep inhalation anesthesia, he prefers spinal anesthesia with 8 to 10 cc. of 0.1% percaine solution with veronal and morphine as pre-operative sedation. This effects complete relaxation, facilitating gentle and quick manipulation. (2) Preparation: not only superficial but deep structures of the carcinomatous growth contain bacteria and each examination or manipulation of the tumor tends to force these bacteria still deeper into the uterine wall and also into the surrounding connective tissue. Therefore, no woman with cervical carcinoma should have a pelvic examination done for at least two days prior to the operation. Curettage, cauterization or tamponade must be avoided preoperatively. (3) Precautions: to prevent the introduction of infected tissue fragments into the peritoneal cavity from the opened vagina, the following technic is used. Only after the rectum and bladder have been completely separated and parametrium resected, so that the carcinomatous growth is supported solely by the vagina, is the vagina painstakingly cleaned with dry gauze from below. Two gauze sponges are introduced into the vagina as high as possible and against the carcinoma, following which, the vagina below this is again cleaned with dry gauze. The surgeon, after changing gloves, returns to the open abdomen. Grasping the specimen with the left index finger and thumb and compressing the vagina below the gauze tampons, he opens the anterior vaginal wall with scissors at a level below his fingers. Through this opening then is introduced another gauze tampon into the distal part of the vagina, following which division of the vagina is completed. This technic always prevents the introduction of cancerous fragments into the abdominal cavity.

The results achieved by following these simple measures can be shown in the results obtained in 231 women operated upon, 152 by the Wertheim technic. There were but 12 deaths in these advanced cases, a mortality rate of 7.96%. There were no deaths from peritonitis which he attributes to the special precautions mentioned above.

COMMENT:

This is indeed an excellent report as far as mortality rate for this operation is concerned. The procedure has been largely discarded in this country, except by a few surgeons, in favor of radium and deep therapy in these advanced cases. Professor Werner's recommendations in the prevention of postoperative peritonitis are well taken and worthy of our consideration in all pelvic surgery.

* * *

PATHOLOGY AND CLINICAL PATHOLOGY

E. T. White, Greenville

CHANGES IN SERUM CALCIUM, INORGANIC PHOSPHATE AND PHOSPHATASE ACTIVITY IN THE PREGNANT WOMAN, M. Bodansky, Am. J. of Clin. Path. (January) 1939—

This report is based on determinations of calcium, phosphorus and phosphatase in a group of 300 pregnant women.

From an average of 9.8 mg. during the second trimester the serum calcium declined to an average of 9.5 mg. during the tenth lunar month.

Attention is directed to the increased frequency of hypocalcemia (values below 9 mg.) as pregnancy advances. Only 6% were below 9 mg. in the second trimester, 13% in the seventh month, 15% in the eighth month, 24% in the ninth month. In the tenth month the trend was reversed with only 13% below 9 mg., but at the time of labor it was 23%.

For the later stages of gestation the averages were somewhat lower during the months from January to May than for the period between June and December. This factor was attributed to the effect of increased hours of sunshine during the summer and fall months. Climatic conditions also have some effect on calcium. The values were lower in northern climates than in southern climates.

Nutritional factors do play a part in the frequency of hypocalcemia. Maxwell's data on Chinese women whose diet was very low in calcium showed cases in which the serum fell below 4 mg. per 100 cc. While it is not improbable that moderate degrees of hypocalcemia may be caused by dietary calcium deficiency, the general experience has been that the level of calcium in the food has little effect on the serum calcium concentration. It has also been noted that a superabundant calcium intake does not assure the maintenance of the serum calcium at the normal non-pregnancy level.

The parathyroid function probably plays an important part on serum calcium concentration. During pregnancy the parathyroids increase in size and functional activity, but in many cases there is failure of proper stimulation to the parathyroid activity resulting in hypoparathyroidism and hypocalcemia. This deficiency in stimulation in some cases may be due to nutritional deficiency but all low values cannot be explained on this factor.

It has been shown experimentally that placental extract can produce a marked hypocalcemia and tetany in dogs, and as the low calcium values of pregnancy soon return to normal after labor the placenta may play a part in the serum calcium regulation during pregnancy.

Very little variation was found in serum phosphorus during pregnancy. Phosphatase was within normal limits up to the seventh month, but after this there was a gradual rise until the tenth month 80% of the cases were above the normal limits. He believed this rise due to the increased lability of the bone metabolism of the maternal organism. The development of varying degrees of demineralization in pregnancy especially with nutritional deficiency, is most probable and even with adequate calcium and phosphorus intake some depletion occurs in the bones thus stimulating an increase in phosphatase activity. Experimental data also shows that the parathyroid function is important in controlling the phosphatase activity.

* * *

THROMBOPENIC PURPURA

Thrombopenic Purpura, Rosenthal, J. A. M. A. (January 14) 1939.

The author reported 153 cases of purpura—29 per cent were in the first decade of life. Acute cases were most often in childhood. Infections and drug idiosyncracy were often the causes, and food allergy did not seem to be a factor.

Acute purpura following infections, drugs or idiopathic forms without a leukocytosis and toxic manifestations responded well to transfusions and snake venom or other forms of treatment, but acute purpura with severe bleeding, leukocytosis and toxic manifestations often terminated fatally and survival did not occur where a splenectomy was done. Another type of purpura that was always fatal is the form that is associated with a pronounced diminution of megakaryocytes in the bone marrow.

Chronic purpura responds to medical treatment in about 50 per cent of cases. Splenectomy is a specific in most cases. Snake venom proved beneficial in many cases and may be used in selecting cases for splenectomy. If snake venom gives a positive intracutaneous skin reaction that will not reverse to negative, the patient will not improve with splenectomy and may be made worse.

Vitamin C, sesame oil, liver extract, parathyroid extract and blood transfusions which may be effective in acute cases did not produce beneficial effects in chronic cases.

* * *

A CLINICAL BACTERIOLOGICAL TEST FOR THE RECOGNITION OF C. WELCHI IN WOUNDS

Robinson and Stovall, Am. J. of Clin. Path. (January) 1939.

The addition of fresh muscle tissue or powdered iron to skim milk results in stormy fermentation earlier and with smaller inoculum than when milk alone is used. An objection to this media is that other germs may interfere with the growth of C. welchi unless the latter is definitely predominant.

C. welchi can be distinguished by its morphology and motility.

by the addition of 1 cc. of a 20 per cent solution of sodium sulfite and 0.1 cc. of an 8 per cent solution of ferric chloride to 10 cc. of skim milk that a favorable media for the growth of C. welchi is produced with more or less inhibition of the growth of other organisms. Due to the production of hydrogen sulfide a black color is produced which is characteristic of C welchi. Many organisms were studied as to their reaction in this media and only C. butyricus iodophilum was found to cause confusion. This organism produces a grayish to a black discoloration depending on the number of germs present but in such cases C. welchi can be distinguished by its morphology and motility.

* * *

PUBLIC HEALTH

Felix J. Underwood, Jackson

Nineteen Thirty-Eight was Nation's Best Health Year, Louis I. Dublin, Statistician, Metropolitan Life Insurance Company, New York, the Diplomat, Vol. II, No. 2.

The year 1938 has been an extraordinary health year in the United States. The principal factors in bringing about this favorable situation were the much lower mortality rates this year from diseases affecting the respiratory system, namely pulmonary tuberculosis, influenza, and pneumonia, and the gratifying accomplishments of the campaign to reduce the shameful toll of automobile accidents. The death rates from tuberculosis, pneumonia, and influenza have reached new minima from the United States. Inasmuch as respiratory disease tends to hasten the deaths of persons suffering from cardiac, vascular or renal conditions a natural consequence was the fall in mortality from most of the chronic diseases of old age. The sole exception to this rule in 1938 was the continuance of the rise in deaths to coronary artery disease. But this increase may be only apparent, reflecting improved diagnosis, together with the newly awakened interest of physicians in this form of heart disease and an increasing tendency on their part to give coronary prominence as the chief cause of death when associated with other conditions.

Evidently the very active crusade against careless driving which has been waged in all parts of the country in recent years is beginning to show results. Present figures indicate that the final tabulation will show fewer deaths by one-fifth from this cause than were recorded in 1937.

Further gains against both infant and maternal mortality also contribute to the salutary state of public health during the past year. It is safe to report new minimal death rates in both of these important fields of public health work.

Aside from the rise in mortality from coronary artery disease, about the only disturbing feature of the present mortality picture is the continued increase of the cancer death rate. The year 1938 is the twentieth consecutive year with a single exception to register a rise in deaths from this disease. There is some doubt, however, as to whether this upward trend in cancer deaths actually marks an increase of the disease or merely reflects the rapid aging of our population, improved methods of diagnosis and more accurate reporting.

The country was comparatively free of poliomyelitis. Less than 1700 cases were recorded throughout the entire country and no section has suffered what might be called a major outbreak. Of the other leading communicable diseases only measles and smallpox were unusually prevalent. Fortunately neither one of them was responsible for much mortality.

At no time in the history of our country have there been so many signs of popular interest in public health affairs. The widespread and active campaign against venereal disease, the ambitious program advocated by the American Tuberculosis Association and the successful National Health Conference at Washington in July, all emphasize the keen interest manifest in communal and individual health. All of this moral and material backing is bound to benefit the work of our health departments, to encourage fruitful research work, and to increase and improve the medical facilities available to the indigent and less fortunate members of society.

March 13, 1939.

* * *

PEDIATRICS

Harvey F. Garrison, Jackson

Grave Hemopathic Icterus of the Newborn, with Intravenous Hemotherapy, Julien Marie and A. Boutet, Paris Med. 55:342 (November 5) 1938.

Familial icterus of the newborn is a peculiar affection which manifests itself immediately after birth and, unless hemotherapy is started soon, always leads to death. In spite of the regular presence of hepatic, and especially splenic, tumor, this severe icterogenic disease of the newborn is not of hepatic origin, as are the severe infectious types of icterus and the early syphilitic icterus of the newborn. It is the expression of a disease of the blood which is constitutional, striking with a sinister regularity all the infants of a family, after the first born, and perhaps the second born, has escaped. Fortunately, it is rare, but this does not excuse one from studying it. Besides, as is the case with all rare diseases, one will observe it with a singularity increasing frequency as soon as he has learned to know it and how to diagnose it. The essential points are: (1) precocious appearance and rapid intensification of an icterus which is associated with choluria and non-alcoholic stools; (2) hypertrophy of the liver and spleen, especially of the latter; (3) habitual hypothermia, an inconstant symptom, for certain cases run a fever; (4) profound affection of the general condition, prostration, precomatose states, difficulty in nursing at the breast, in fact, in feeding by no matter what method, due to the infant's complete torpor; (5) anemia with an erythrocyte count around 2,000,000, and presence of a large number of nucleated elements (10,000 to 50,000 erythroblasts per c. mm. of blood); (6) familial character of the disease; (7) curability, by hemotherapy, blood transfusions and liver extract.

The writers think their observation indicates that the hemotherapy must be intravenous to begin with, the subcutaneous or intramuscular incorporation of blood being of little avail except as an adjuvant. The very first transfusion must be of at least 20 to 30 cc. per Kg. of body weight. In favorable cases this may suffice, if not it suffices at least for a long time, and another transfusion will not be necessary before a reasonable lapse of time, which is desirable in view of the delicate technic of the procedure at so tender an age. The best technic is slow continuous instillation into the bared vein of the elbow bend. Transfusion into the longitudinal sinus is, no doubt, technically easier, but it is much more dangerous. Transfusion into the jugular vein must be reserved for those who possess the necessary technical experience.

The value of the anti-anemic therapies and of the feeding with mother's milk in sufficient quantities is obvious. One must not forget that the anemia, and not the erythroblastosis, is the constant feature in icterus gravis neonatorum, and that the organism needs every help one can give it to fight the icterus.

COMMENT:

I have had three cases of grave hemopathic icterus of the newborn similar to those outlined in this abstract in the past year. I treated all these cases in the same manner as outlined by the authors of this abstract. I would like very much to emphasize the importance of immediate treatment of all cases of grave hemopathic icterus of the newborn. Delay in treatment jeopardizes the chances for recovery. Practically all of these cases can be saved, if properly and promptly treated.

March 18, 1939.

* * *

EYE, EAR, NOSE AND THROAT

Alston, Callahan, Vicksburg

TE TRAINING OF EYE MUSCLES—Ophthalmologists have greeted with interest the many devices that have been offered during the past twenty years for training of the ocular muscles. Most of these have been adaptations of the original Wheatstone stereoscope, and further developments of Worth's amblyoscope. Such instruments are being sold today, with newer modifications, under such names as the synotophore, the orthoptoscope, and combinations of the two principles, the stereoorthoptor. All of these, however, suffer from numerous disadvantages. Chief of these are the fact that it takes a skilled operator—either the physician himself, or a trained assistant, and the fact that it is difficult for many to continue a sustained interest. Even beautiful and unusual pictures quickly lose their attractiveness and become monotonous.

An entirely new device, the metronoscope, has now been placed on the market, and while it does not promise to correct all types of muscle imbalance, it does eliminate the above mentioned disadvantages. In construction and operation, it is extremely simple, consisting of a triple shutter, short exposure device for carrying on controlled reading. Thus the practitioner has a means for applying remedial measures to the situation (difficulty in reading) that has caused a large percentage of people to consult him for professional advice and service. The eyes are compelled to read in a rhythmical left to right sequence, and conditioned to an accurate return sweep. The reaction time is controlled by limiting the length of the exposure time, and, as the material cannot be re-read, regressive movements within the line are discouraged. The speeding of the reading also is automatically controlled and can be increased gradually without affecting the rhythm and accuracy.

The reading material can be varied with the intelligence of the child or adult and a series of rolls, from pictures with names to mystery and adventure stories are supplied with the apparatus. Once the machine is set in motion, and the prisms adjusted so that the weaker muscles may be stimulated, and the speed regulated so that the individual must make an effort to keep up with the story, the machine is automatic, runs for fifteen to twenty minutes without any attention from the physician. Only a short period of time is allowed at first, for the stimulation is so great that the muscles may be used to exhaustion and considerable pain experienced from them.

Corrective training is thus given to reading disability cases caused by oculomotor and fusional deficiencies. The chief complaint of a large portion of the eye physician's patients is, "difficulty in reading." This is not surprising when it is realized the magnitude of the demands which reading and near point work make upon the ocular apparatus.

Attention has always been given in the past, very promptly to refraction, the search for disease, and to a study of the muscular balance. Most cases respond very promptly to the correction of any of these abnormalities, but there has always existed a small proportion of individuals who either had no such abnormalities, or did not obtain complete relief from their correction. Aniseikonia and the many factors influencing its correction, was the answer to some of this minority and reduced the number of incompletely treated patients. Unquestionably, this new concept of training the eyes to read correctly will reduce this even more. Particularly so when it is combined with the correct orthoptic training.

We have had our metronoscope only a short time, and cannot present a long series of cases establishing its merit. Nevertheless, we feel it is a distinct improvment over other forms of orthoptic training; for example, one of our cases was a neurotic young woman, for whom we had prescribed a one diopter cylinder in each eye. She was quite prejudiced against glasses, and would not wear them constantly, and thus complained that her eyes hurt when she wore them and when she did not. We did not believe that she had ever tried conscientiously to use them, and, therefore, had her read twenty minutes three times a week for two weeks. The patient quickly lost her difficulty in using her glasses, prefers to use them constantly. We have realized that in ordering glasses for the first time, or in making a material change in the strength of the lens, that we were upsetting the balance between convergence and accommodation. Naturally there is some effort to get adjusted to the frames on the face, but most people tolerate them easily. Many eye physicians say, "Wear these glasses all the time for the first two weeks, for they will hurt you that long, and you must get your eyes adjusted to them." That is true, but what we mean is: "Go out and learn to reassemble the balance between convergence and accommodation since we cannot help you." Now, however, when refraction is completed, we have the individual to read with the metronoscope and thereby give a concentrated dose of accommodation-convergence training, so that the duration of "adjustment time" is brief.

On the more obvious indications—such as before and after ocular muscle surgery, so as to establish fusion or development of a perfected muscle balance, we have yet had time to investigate. It bids fair to accomplish these things, and we plan to give a further detailed report within a few months.

March 14, 1939.

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GREENWOOD-LEFLORE HOSPITAL STAFF MEETING

At the regular meeting of the staff of the Greenwood-Leflore Hospital, Feb. 2, there were 15 doctors present to enjoy the nice oyster supper. After the regular business, and reports of committees, a discussion of the deaths that occurred during the month was taken up, Dr. G. Y. Gillespie reported a case of a white woman, 34, lobar pneumonia left lung, type III. The use of sulfanilamide in pneumonia was discussed. Dr. S. L. Brister then reported a case of pneumococcic meningitis in a boy, 15 months old, to whom he gave prontosil, who died in two days after entering the hospital. This case followed an ear abcess, two weeks before. He also reported a case of the death of a three-day-old baby with convulsions and jaundice from cerebral hemorrhage due to birth injury. Dr. J. F. Lucas reported a case of premature birth in an eclamptic, dying in eight hours.

Films on empyema were then shown. Other films have been shown during the month. On Thursday night, Feb. 23, an illustrated film on bone grafts was shown. At this meeting, Dr. L. A. Barnett, county health officer, presented Mr. W. R. Boggs, who represented the committee on Postgraduate Medical Education in Mississippi, and it was decided to have this course in March, for Leflore and adjoining counties, on syphilology.

W. G. Dickins

Greenwood,
March 1, 1939.

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HOSPITAL STAFF TRANSACTIONS

CALENDAR OF HOSPITAL STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASSOCIATION, Tenth Annual Session, Gulfport, May 8, 1939.

Aberdeen Hospital: Third Monday, each month, 7:00 p. m.

Anderson Infirmary: First Friday, each month, 6:30 p. m.

Biloxi Hospital: First Thursday, each month, 7:30 p. m.

Bramlett Hospital: Third Wednesday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 12:00 noon.

Field Memorial Hospital: Second Thursday, each month, 6:30 p. m.

Gilmore Sanitarium: Third Thursday, each month, 8:00 p. m.

Greenwood-Leflore Hospital: First Thursday, each month 6:30 p. m.

Grenada Hospital: Second Tuesday, each month, 6:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month. 7:30 p. m.

Holmes County Community Hospital: Second Thursday, each month, 7:00 p. m.

Houston Hospital: Last Thursday, each month, 7:30 p. m.

Ivy Hospital: First Monday, each month, at 7:00 p. m.

Jackson County Hospital: Second Thursday, each month, except July and August, 7:00 p.m.

Jackson Infirmary: Last Tuesday, each month, except three summer months, 7:00 p.m.

King's Daughters Hospital, Brookhaven: First Tuesday, each month, 7:00 p. m.

King's Daughters Hospital, Greenville: First Wednesday, each month, 7:00 p. m.

King's Daughters Hospital, Gulfport: Third Thursday, each month, 8:00 p. m.

King's Daughters Hospital, Yazoo City: First Monday, each month, 7:30 p. m.

Macon Hospital: First Tuesday, each month, 7:30 p. m.

Magee General Hospital: Twenty-fifth each month, 7:30 p. m.

Mayes Hospital: First Monday, each month, 2:30 p. m.

McComb City Hospital: First Tuesday, each month, 6:00 p. m.

McComb Infirmary: Second Thursday, each month, 7:00 p. m.

Meridian Sanitarium: Second Thursday, each

month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Mississippi State Hospital, Vicksburg: Third Tuesday, each month, 7:00 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

New Albany Hospital and Clinic: Second Tuesday, each month, 8:00 p. m.

Newton Hospital: Second Thursday, each month.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Oktibbeha Hospital: Last Thursday, each month, 7:30 p. m.

Oxford Hospital: Last Monday, each month.

Pontotoc Clinic: First Tuesday, each month, 7:30 p. m.

Rush's Infirmary: First Friday, each month, 7:30 p. m.

Scott County Hospital: Third Wednesday, each month.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

Tylertown Hospital: Second Thursday, each month, 7:00 p. m.

U. S. Veteran's Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:30 p. m.

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IVY HOSPITAL STAFF MEETING

Regular monthly staff meeting of the Ivy Hospital was held Monday, March 6, at the Ivy Hospital.

Spectacular cure of multiple rectal ulcers in a space of several days was reported by Dr. George Campbelle.

Dr. F. P. Ivy reported marked improvement in several cases of pneumonia with the use of sulfanilamide.

Dr. Ivy reported and discussed several recent compound comminuted fractures of the femur, tibia and fibula. He presented x-ray pictures of these fractures during the discussion.

Dr. Ivy is now redecorating the hospital throughout, which is a great improvement.

Dr. George Campbelle.

West Point,
March 6, 1939.

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MATTY HERSEE HOSPITAL

On the 15th of February, 1939, Dr. W. W. Reynolds was appointed superintendent of Matty Hersee Hospital, Meridian.

His staff is as follows: Dr. Guy T. Vise, assistant superintendent; Dr. W. J. Slaughter, resident physician and surgeon; Dr. John C. Henthorne, pathologist; Mrs. Evans Bozeman, secretary; Miss Jewel Seale, superintendent of nurses; Miss Eva Hickman, laboratory technician.

Miss Ursula McGovern, former superintendent of nurses at Matty Hersee hospital, has accepted a position in the Choctaw Sanitorium Hospital, Talihina, Okla.

Mrs. Evans Bozeman,
Secretary.

Meridian,
March 6, 1939.

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VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held on Friday, March 10, and after a supper served at 6:30 p. m., was called to order by Dr. L. J. Clark, vice-president, with thirteen members and three guests present.

SPECIAL CASE REPORTS:

(1) Ectopic Pregnancy—Dr. G. M. Street. Discussed by Drs. S. W. Johnston, E. H. Jones and W. E. Johnston.

(2) Amoebic Dysentery—Dr. L. J. Clark. Discussed by Drs. F. M. Smith, A Street, S. W. Johnston.

(3) Thrombocytopenic Hemorrhagic Purpura—Dr. R. A. Street, Jr., Discussed by Drs. G. M. Street, G. C. Jarratt, F. M. Smith and A Street.

REPORT OF VITAL STATISTICS—Dr. F. Michael Smith, director, Warren County Health Department.

DEMONSTRATION OF SELECTED ROENTGEN RAY STUDIES—Fracture of pelvis; bismuth deposits in long bones (prenatal syphilis); atelectasis; pulmonary tuberculosis (2 cases); sinusitis; bilateral renal calculi (2 cases); left renal calculus.

THREE-MINUTE REPORT OF THE LITERATURE OF THE MONTH

1. Dr. S. W. Johnston—Deafness.

The next meeting of the staff will be held Monday, April 10, 1939.

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ABSTRACT: AMOEBIC DYSENTERY

Laurance J. Clark, M. D.

Patient: White, female, married, age 39, admitted to the Sanitarium Feb. 17, 1939.

Chief Complaint: Fever, paroxysms of intense pains throughout entire abdomen, and loose stools, as many as three and four per hour, small amount, but bloody, and containing a great deal of mucous and associated with tenesmus.

This patient was seen at home three days prior to admission. At this time, she stated that for about three weeks she had been feeling bad with irregular abdominal pains, some nausea, headache, and slight loss of weight. No fever or diarrhea was noted. She was having at that time, fever ranging from 102F. to 104F.

Complete physical examination was negative, except for slight redness in the pharynx and general abdominal soreness. A diagnosis of influenza was made tentatively. The headache was rather intense, but there was no rigidity of the neck, no projectile vomiting. It was necessary to give morphine at intervals for relief of her intense headache and aching. Early in the morning of admission, she began to have frequent, loose, bloody and mucous stools, associated with a great deal of tenesmus. At this time, the fever began to decline and, 24 hours after admission, was normal. Examination of the blood revealed leukocyte count of 18,200 with a normal differential; normal urinalysis. Feces showed 4-plus occult blood, numerous pus and fresh blood cells microscopically. Stool examination was repeated on four occasions, and the same findings of blood and pus were encountered on each occasion. Culture of stool revealed no bacillary type of dysentery. No amoebi were found. Going back further into the history of the condition, I learned that this patient had visited in Florida six weeks previously, spending about two weeks there, and during this time made a trip to Key West and had eaten a great deal of sea food and been in contact with quite a bit of raw vegetables and eaten rather indiscreetly. She had noticed, since returning from Florida, that she had not been feeling well, having symptoms as stated before.

Immediately after admission, she was started on diodoquin and one grain of emetine by hypodermic daily, and at the present time, is entirely free of symptoms.

I present this case, not unusual, but on account of the fact that, in spite of the negative laboratory findings, the history, together with the therapeutic test, is frequently necessary to at least cause you to be suspicious of amoebic dysentery. The history of her vacation place and the complaints that had been stated prior to her illness, which included irregular abdominal cramping of several weeks' duration, which is otherwise unexplained, led to a suspicion of amoebic dysentery. I hesitate to make a diagnosis of amoebic dysentery infection without a positive laboratory finding, but I feel that in a case like this, we are justified.

ABSTRACT: PURPURA HEMORRHAGICA

R. A. Street, Jr., M. D.

Patient: L. W., colored male, age 39, section laborer, was admitted to the hospital Jan. 1, 1939, with history of bleeding from the gums, bloody urine, and painful swelling of both inguinal regions for the past five days. Bleeding has increased in intensity, and there has been marked weakness and malaise for the past few days, with fever today. No history of taking any drugs recently; no vomiting, but some nausea; no diarrhea, no cough or night sweats; no recent weight loss.

Past History: Two years ago, took 12 shots of arsenic and bismuth at weekly intervals following a positive Wassermann report, but had no history of a chancre. Gonorrhea ten years ago, no symptoms now. Otherwise, past history not remarkable.

Physical Examination: Well developed and well nourished colored male, temperature 102F., pulse, 100; blood pressure, 130/90; respiration, 18. General appearance was that of an acutely ill patient. There were numerous punched-out ulcers in the buccal cavity and rather free bleeding from the gum margins. No enlargement of the spleen was observed. There was enlargement of the inguinal glands on both sides, the largest gland being about the size of a pecan and moderately tender. Examination otherwise not remarkable.

Clinical Laboratory: Urine contained many fresh blood cells with 4-plus hemoglobin and in macroscopic specimen very smoky red in appearance. Red blood count 4,090,000, with Newcomer hemoglogin of 14.5 grams. Coagulation time, 1 minute, bleeding time, 3 minutes. Differential count essentially normal. No malaria found. Blood fragility essentially normal. Platelet count, 42,670. Clot retraction: clot had retracted in 42 hours, (normal clot retraction time is 18 to 24 hours). Serology: blood Wassermann, 4-plus; Kline and Young, 4-plus; Kahn, 4-plus; Eagle flocculation positive x-ray of thorax negative.

Course in Hospital: Patient given calcium gluconate in the vein daily and donors were typed for blood transfusion. The first transfusion of 500 cc. of citrated blood was given January 3, at which time the red blood count had dropped down to 2½ million. Improvement not so noticeable at this time, bleeding checked some. The second blood transfusion was given January 6, at which time the red blood count was 2,820,000 and platelet count had risen to 78,540. Bleeding checked considerably at this time. Deep x-ray therapy over the spleen was started Jan. 7, giving 300r over the spleen daily. Jan. 12, the red count was 3,010,000; hemoglobin, 67% by Tallqvist method; platlets, 72,480. Condition greatly improved. Bleeding checked entirely. Jan. 16, patient was referred to New Orleans. He has also received injections of neoarsphenamine and bismuth Jan. 9 and 15. He was admitted to the New Orleans hospital on the same date and remained there until February 7. His platelet count had steadily improved, and the last count showed a count of 300,000. His red blood count remained around 3,000,000. He was given no further antiluetic treatment there, but was put on a prescription of Blaud's pills, one three times a day. When he reported back to Vicksburg, he was again started on antiluetic treatment and has improved sufficiently at the present time to return to work. The glands have receded in size in the inguinal regions and general condition otherwise is greatly improved. There has been no further bleeding from any source.

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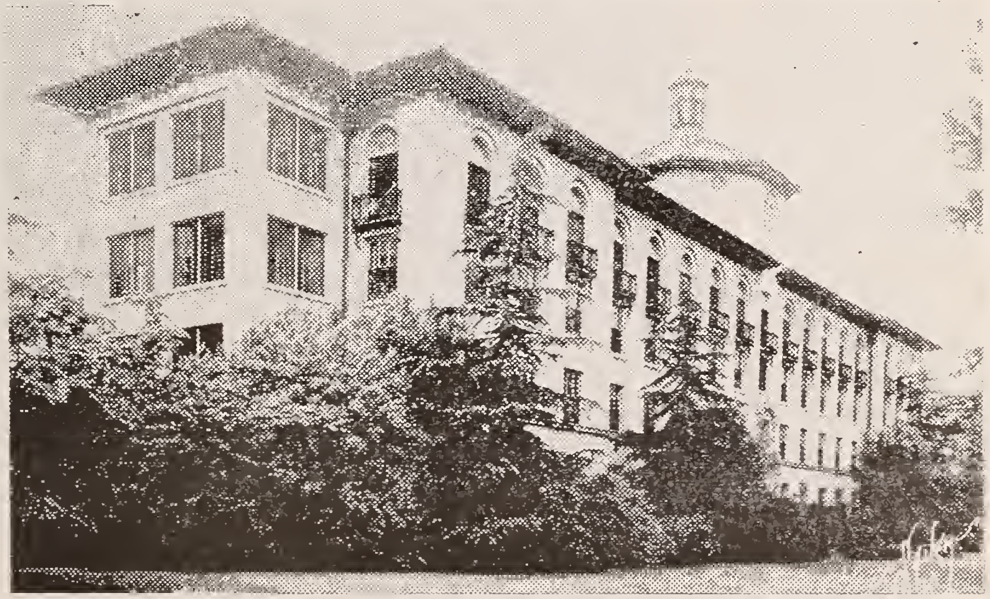

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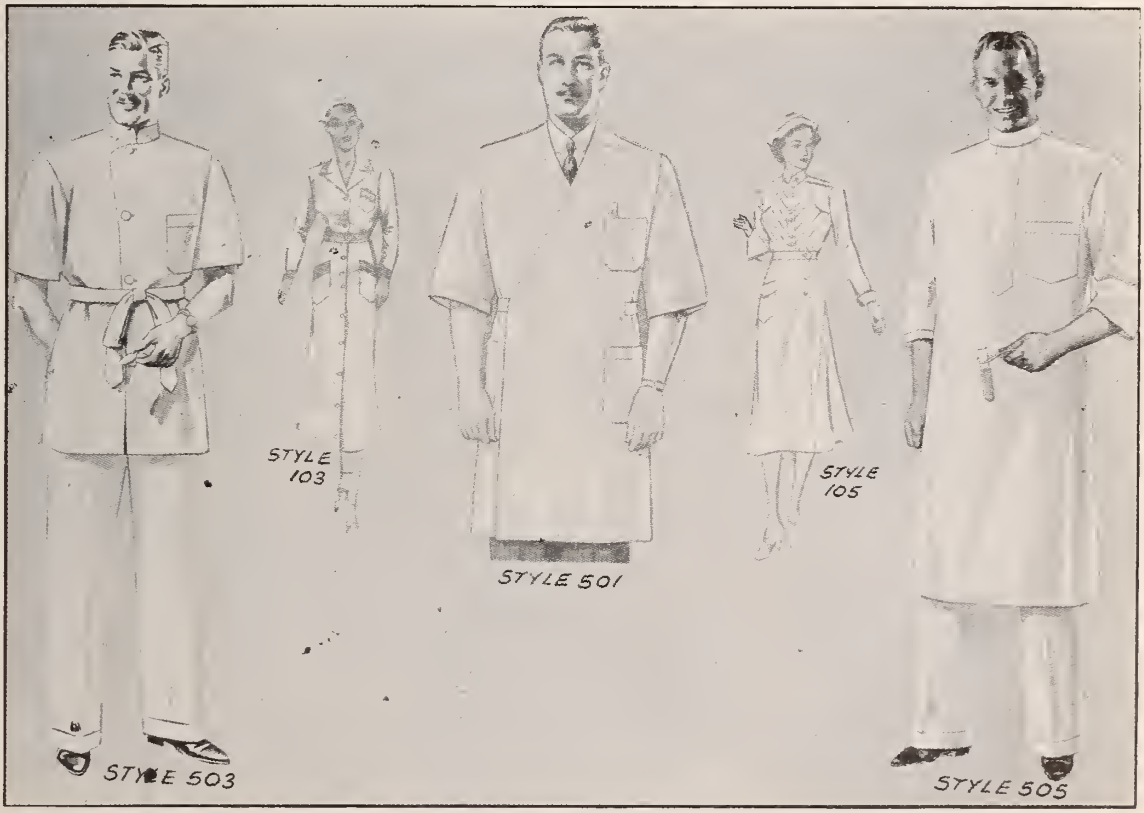
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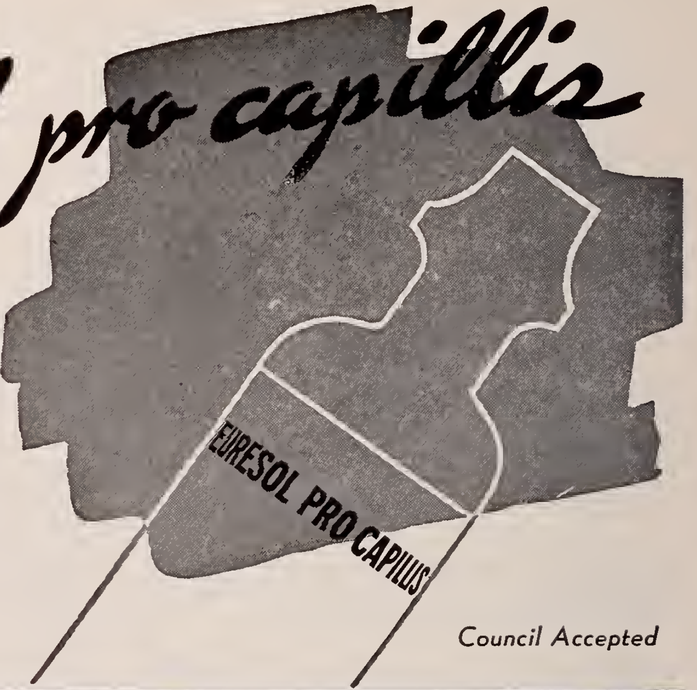

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The Treatment of the Commoner Disorders of the Heart*

GEORGE HERRMANN, M. D.
Professor of Clinical Medicine, University of Texas
GALVESTON, TEXAS

THE FUNCTIONAL CARDIOVASCULAR DISTURBANCES

AS IN MOST fields of medicine, the psychogenic and neurogenic disturbances that center about the heart comprise a large percentage of all cardiac disorders. Since they are functional, and not organic, they present a more hopeful prognosis, require an altogether different treatment and for these very reasons it is important to be able to differentiate them from the more serious organic heart diseases. Cardiac psychoneuroses occur in individuals who have been under severe nervous strain over a period of time. Patients suffering from nervous exhaustion, or working under the drive of a fatigue excitement, are easy prey to such disorders, as well as to neuro-circulatory asthenia or the effort syndrome. Since they are emotionally unstable, at least for the time being, the slightest external pressure can either carry them into a neurosis or start them back on the road to recovery.

The physician who expects to control successfully the psychoneurotic cardiac patient must exercise wisdom, knowledge, conviction, care and tact to prevent fear from continuing a neurosis. He must be especially careful to reassure an anxious patient to allow the patient to realize that there is even a question of heart disease is often demoralizing. The abrupt pronouncement of a cold professional diagnosis of "failure" or "valvular leakage" or the use to the laity of the term "angina pectoris" is often disastrous. I feel that the wisest and kindest attitude and plan consists in tactful evasion of the matter of the diagnosis with the patient. For one never knows when a patient who may seem to be stolid will develop psychogenic symptoms after hearing a diagnosis of possible organic heart disease. In any case, the added suffering of cardiac and vascular neuroses must be avoided when possible. The further fact that is even more important, is that neuroses may in time actually produce secondary pathological changes.

Cardiac and vascular neuroses, or functional heart trouble, as a rule must be overcome by a carefully planned régime. Exercises, diet, and sharp disciplining, along with reassurance, the removal when possible of sources of irritation, and the indulgence in rest and more rest are in order. A careful explanation of the possible origin and the mode of development of symptoms may often do much toward the relief of the same. The usual medical treatment is ordinarily not sufficient, but may temporarily have to be prescribed. The physician must be certain of his diagnosis and exhibit confidence in his ability to manage the situation.

Carefully supervised, graduated exercises that may be particularly effective are those developed by Bertnard Smith for the United States Army and published just after the World War. At least they will help to determine safely and accurately the patient's exercise tolerance, so that he may be advised rationally and his activities sanely limited. The chapter on psychotherapy in William R. Houston's "The Art of Treatment" should be carefully studied and put into practice.

DISTURBANCES OF THE RATE OR RHYTHM OF THE HEART'S ACTION

Cardiac mechanism disturbances are among the commonest of the disorders of the heart. They may be divided into two groups from the standpoint of prognosis and treatment.

Group I is made up of the minor or benign disorders, any one of which may and usually does occur without there being significant myocardial damage. Group II contains the major or serious disorders, each one of which in itself indicates heart disease.

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*Read at the meeting of the Mid-South Postgraduate Medical Assembly, Memphis, Tenn., Feb. 14, 1939.

In Group I may be included (a) sino-auricular or sinus tachycardia, (b) sino-auricular or sinus bradycardia, (c) premature contractions, and (d) paroxysmal tachycardia. In Group II are listed (e) auricular or atrial flutter and fibrillation, (f) atrioventricular block, partial or complete, with or without Adams-Stokes attacks of convulsive syncope, and (g) alternation of the pulse, the blood pressure, and the ventricular contractions.

BENIGN CARDIAC MECHANISM DISORDERS

Any one of the disorders listed in Group I, but particularly sinus tachycardia, may be the result of psychogenic or emotional mental disturbances. Fever, which is associated with various other infectious disease processes and metabolic disorders, such as hyperthyroidism, are common extracardiac causes of tachycardia. In such cases, of course, treatment must be directed toward the relief of the general condition rather than specifically against the tachycardia. Reassurance may remove the psychogenic elements of nervousness and worry. Rest in bed is necessary for the prompt control of infectious diseases. Hyperthyroidism often responds to isolation, but iodides and partial thyroidectomy usually must be resorted to.

Vagus-stimulating drugs, such as pilocarpine, acetylcholine and cardaic glucosides are not usually administered in the hope of directly slowing the heart rate. Thevetin from the bestill nut has been reported effective in the tachycardia or hyperthyroidism. When the sinus tachycardia is a part of a picture of congestive failure, digitalization may be accompanied by a drop in the heart rate as a result of the improvement in cardiac and peripheral circulation. The decrease in heart rate is thus a secondary, albeit a beneficient, effect of the drug.

Sinus bradycardia may be a perfectly normal finding in one who has a great deal of athletic training, and under such circumstances does not call for any treatment. Occasionally the vagus tone is for some reason abnormally high. Under such circumstances a slight pressure stimulation of the carotid sinus results in a period of asystole. Such individuals are in danger of having a vagus faint upon pressure being applied to the neck, and steps should be taken to decrease the vagatonia. This may be accomplished by the regular use of belladonna tincture drops 10 three times a day, or atropine sulphate 1/150 gr. t. i. d., or thyroid extract ½ gr. twice a day.

In the presence of conspicuous jaundice there is usually a slow heart rate that does not cause any trouble and does not require specific treatment. When the bradycardia is a response to increased intracranial pressure and the pulse rate drops to a critical level below 40 per minute, it might be desirable to decrease the edema of the brain by the intravenous injection of hypertonic 50% glucose solution in amounts of 50 to 100 cc. every few hours.

Sinus arrhythmia is a perfectly normal reaction to the normal waxing and waning of vagus tone in a youthful heart. The most important thing is to differentiate this benign irregularity from auricular fibrillation. No treatment is necessary unless the patient is worried about the irregularity. He should then be reassured, and if this is not sufficient, he may be convinced by showing him how easily regularity may be established. Tincture of belladonna may be administered in increasing doses from 5 to 10 drops t. i. d., and the disorder will be removed.

Extrasystoles, premature contractions, or ectopic beats are likewise among the most insignificant of mechanism disorders. The nervous patient may worry considerably about the irregularity and require complete reassurance. In those who remain sensitive to every premature contraction and are distressed by the same, it is worthwhile to try the effect of general sedatives, as phenobarbital in ¼ gr. doses. Potassium also is apparently a myocardial sedative, and its administration may be in order. The potassium content of the diet may be increased by the use of paprika, the part of the potato just under the jacket, olives and nuts. Usually it is necessary to administer one of the salts, potassium, iodine, acetate, or chloride in 15 to 30 gr. doses t. i. d. When the premature contractions fail to respond to these simpler remedies it may be necessary to give the patient quinidine sulphate in daily rations of 10 to 20 gr. Digitalis preparations are generally reserved and administered only after all other treatment has failed to restore the regular rhythm.

Paroxysmal tachycardias are merely runs of premature contractions linked together. The sudden rises of the heart rate to 180 to 240 per minute are usually disturbing, and if they appear after an operation they may interfere with the circulation in the operative field. As a rule the paroxysms stop spontaneously after a few minutes to half an hour, but occasionally they continue for hours and sometimes longer. When a state of emergency seems to exist it is desirable to stop the attack as promptly as possible. To this end the carotid sinus reflex on the right side may be invoked by sharp pressure of the fingers compressing the bifurcation of the carotid against the transverse processes of the cervical vertebrae. This has been effective in about half of our cases. Patients who have recurrent paroxysm have usually learned tricks to stop attacks. Bizarre positions, swallowing, irritating the ear, forced inspiration or expiration against a closed glottis—all of these may be effective through reflex stimulation of the vagus nerve. Morphine sulphate ¼ gr. hypodermically is usually successful in stopping an attack, but where there are frequent recurrences morphine should be withheld because of the danger of habit-formation.

Sprague found that syrup of ipecac, in 1 to 2 gr. doses by mouth, to be an effective and safe, though messy procedure for stopping paroxysmal tachycardia. Ipecac should cause nausea and vomiting within 15 to 45 minutes. If this does not occur, the dose should be repeated. It may be necessary to increase the dosage to the point of perisympathetic stimulation in order to get peripheral and central vagus action, in refractory paroxysmal tachycardia. It may be necessary to resort to cinchonization with quinidine sulphate in 5-gr. doses every hour, administering as many as 8 doses. St. Feher advised the use of 20% solution of magnesium sulphate intravenously, 5 cc. slowly and then 5 cc. more rapidly, to abort a severe and persistent attack.

Acetylbetamethylcholine in 1/6 to 1/7 gr. (10 to 30 mgm.) subcutaneously, was found by Star and Stroud to be effective in increasing the vagus tone so that the carotid sinus pressure, which had previously been ineffective, would cause a sudden cessation of the disorder.

The prevention of the recurrence of paroxysms is quite as important as the treatment of an attack. Assurance, re-establishment of self-confidence and psychological readjustment must be accomplished. Abstinence from the use of caffeine, tobacco, or the taking of other poisons may be helpful in removing the irregularity. An increased intake of potassium in the diet, or as the iodine, acetate, or chloride, may reduce cardiac irritability. In some individuals small daily doses of 5 gr. of quinidine sulphate prevents the return of attacks and should be used. In other refractory cases digitalization may be the only effective prophylactic measure, and in these its regular exhibition is justifiable.

Paroxysmal junctional tachycardias are of longer duration and much more refractory to treatment than any other type of tachycardia. Digitalization seems to be about the only hopeful method.

Paroxysmal ventricular tachycardia usually originates in a myocardial infarct and is truly one of the serious cardiac mechanism disorders. It rarely is benign, and quinidine sulphate in 5-gr. doses every hour for not more than eight doses acts as a specific. Quinidine sulphate in two daily rations of 5 gr. usually serves as a prophylactic.

SERIOUS MECHANISM DISORDERS OF THE HEART

Atrial auricular flutter and auricular fibrillation are both circus rhythms and might well be considered together because their treatment is essentially the same. Flutter is a rhythmic tachycardia and is at times difficult to differentiate from a sinus or functional tachycardia. The rate is usually between 130 and 150 ventricular beats per minute. In this way it differs from the paroxysmal tachycardia of auricular or ventricular origin in which the the rates are usually 160 and above. Flutter frequently exhibits a very sensitive, temporary and characteristic reflex vagus reaction. On stimulating the carotid sinus by pressure there results an asystole, but in spite of continuation of the pressure the ventricular action characteristically steps up to higher and higher rates, and the high-grade block returns to the previous two-to-one block levels. Digitalization may cause the replacement of the two-to-one ratio by a persistent four-to-one block. The rhythm may be made irregular by this cardio-sinus pressure test, in which the usual 2:1 block is increased and then lets up to 19:1, 9:1, 7:1, 5:1, etc., until it returns to 2:1. The electrocardiogram practically always gives conclusive diagnostic information.

The most generally successful treatment of auricular flutter is rapidly to overdigitalize the patient until the flutter has been changed to auricular fibrillation. Then withdraw the drug completely, and as the concentration in the auricular muscle decreases the blocking effect disappears. As the fibrillation disappears there is usually a return of the normal sinus rhythm. At one time rapid cinchonization with quinidine sulphate was advocated as a first trial, with the hope of changing the mechanism directly over into a normal mechanism without going through the stage of auricular fibrillation. This, however, is not nearly so often successful as the method of rapid intoxication with digitalitis. Occasionally a patient with auricular flutter even resists this method of therapy and the flutter continues year in and year out. In such cases digitalization may change the block from 2:1 to a 4:1 in which the ventricular rate remains at a low efficient level.

Auricular fibrillation is a condition that responds most spectacularly to the use of the cardiac glucosides, particularly those of digitalis. Older practitioners prefer to use a standardized alcoholic tincture, but in recent years the powdered whole digitalis leaf has become most popular. The tincture is standardized so that one cubic centimeter equals one cat unit and the powdered leaf is put up in pills of 1½ gr. (0.1 gm.) equal to one cat unit. Of late there has been marketed a 1 gr. pill equal to one cat unit. The Hatcher cat method of biological standardization of digitalis still holds an important position in digitalis therapy.

As a rule digitalization may be accomplished by the administration of one cat unit for each 10 pounds of the patient's body weight, in one massive dose, or in large quarter-total divided doses at 4 and 6 hour intervals. The patient who is suffering from high-grade auricular fibrillations and has not previously had digitalis may be given with comparative safety 3 to 6 pills of the powdered leaf 4½ to 9 grs. (0.3 g. 0.6 g.) to be followed by 3 pills every hour until 15 pills are taken (1.5 g. or 18 grs.) after which 1 pill every 4 hours. This usually suffices to complete digitalization after a few doses.

It is rarely necessary to resort to intravenous injections of the digitalis glucoside. In an occasional case, when there is no response, one might suspect the slow absorption of the drug through the congested gastro-intestinal canal, or liver, then one might resort to the rectal administration in the hope of getting the drug into the vena cava directly, instead of through the portal system. Digifolin and digalen are good preparations for intramuscular and intravenous injections. The newer extracts of digitalis lanata, namely, digoxin, or digilanid, are superior products which accomplish digitalization promptly by mouth or by vein in (1/48 to 1/16 grs.) 1.5 to 4 mgm.

The index of effectiveness of digitalis is the reduction of the heart rate and its relation to the pulse rate. When the digitalis effect is being exerted the heart rate drops while the pulse rate may rise slightly. The administration is continued until the heart rate has decreased to between 60 and 70 and there is no pulsus deficit. The irregularity of course still persists. In a rare case the normal mechanism may be re-established not as a result of the use of the digitalis, but in spite of the digitalis. The return to normal mechanism is the result of the improvement of the cardiac and the general circulation that follows the administration of the cardiac glucoside.

Quinidine sulphate in 5 gr (0.3 g.) doses is perhaps indicated in cases of paroxysmal or acute auricular fibrillation in young individuals. In such instances the drug is used in 5-gr. (0.3 g.) doses every hour for perhaps at the most 8 doses. If the drug is going to be effective in its restoration of normal mechanism it will do so as a rule before the eighth dose, or just after it. In such patients it is usually necessary to give small daily rations, perhaps 5 to 10 gr (0.3 g. to 0.6 g.) of quinidine sulphate in order to prevent the return of auricular fibrillation when the normal mechanism has been established.

HEART BLOCK AND ADAMS-STOKES ATTACKS

Heart block, partial or complete, may be entirely asymptomatic, and suspected only from the very slow pulse rate of around 40. When the heart rate has been suddenly decreased, or when there is a multiple rise or doubling in response to exercise, or no rise in rate whatsoever after the evercise, we can be fairly sure of the diagnosis. Again the only certain method is by means of an electrocardiographic record. Many patients carry on for years without any embarassment directly attributable to the abnormally slow heart action. In such patients no drug therapy is necessary.

They should be advised that undue stress and strain should be avoided.

Patients with conduction disturbances in the A-V bundle may suffer from Adams-Stokes attacks of syncope and convulsions. The treatment of such attacks may be divided into emergency and prophylactic measures. The emergency treatment consists in sharp precordial blows, in hopes the reflex stimulation may result in an ectopic beat which will inaugurate rhythm. If the abdomen is open or if it is possible to get at the heart through the diaphragm, cardiac massage is in order. Immediate directions should be given for the preparation of adrenalin in a syringe with a long needle; a minim or two may be introduced into the jugular vein and the patient put in the upright position with the hope that it might gravitate to the heart. If, after [illegible] minutes, there is no response, it is justibiable to thrust the long needle through the myocardium and into the left ventrical, and inject 3 minims of adrenalin as the needle is withdrawn.

In the common type there is a gradually increasing partial heart block, and when the complete dissociation sets in the ventricle does not immediately respond and take up the idioventricular rhythm. During this asystolic time the cerebral circulation becomes inadequate. There are two ways in which this status may be combatted. In the first place, atropine sulphate, or thyroid extract, ephedrine, or paradrine may be administered with the hope of continuing the A-V conduction and preventing the complete dissociation. On the other hand, the patient may be digitalized and changed from partial to permanent complete block which, when it results from digitalization, may be of a higher rate and be sufficient to carry on the minute volume of the heart. It is necessary to maintain circulatory equilibrium. In the Wenckeback type, two heart blocks, where there is no P-R interval increase preceding the complete dissociation, these same methods may be successful.

Heart block patients who have persistent, complete dissociation, with a ventricular rate that usually is about 440 may sometimes slow down to as low as 8 to 10 per minute and therefore require constant treatment. With such individuals it is necessary to increase the rhythm and irritability of the ventricular musculature, and this may be done by the use of adrenalin, ephedrine, barium chloride, or better still, paradrine.

PULSUS ALTERNANS

Alternation in the heart beat is evidence of serious myocardial damage, particularly when it appears spontaneously, not heralded by premature contractions. There is no specific therapy for the condition, though cardiac supportives or tonic treatment are usually effective. Xanthines are given in the hope that they will increase the coronary circulation and improve the condition of the various masses of cardiac musculature. If flushed with blood the heart muscle will not be refractory when the impulse spreads from the normal conduction pathway. Digitalization will enhance the tone of the myocardium and sometimes overcome the alternation.

THE TREATMENT OF ANGINAL FAILURE

The paroxysmal cardiac pain of angina pectoris is characterized by the fact that it responds dramatically to the administration of nitroglycerine in doses of 1/100 gr. or even smaller doses as inhaled amylnitrite, or ingested erythroltetranitrate, or whiskey, may have similar but less prompt beneficial effects. Inhalation of oxygen when used in concentrated atmosphere will likewise frequently relieve the distress. Rest, of course, is an essential part of any treatment. The patient in an anginal seizure characteristically fixes himself statuesquely. He will not move out of his steps.

In the more prolonged attacks we may consider the intravenous use of aminophyllin in 7½ gr. or ½ gm. doses diluted usually with 50% glucose. There are those who have advocated the use of 300 to 500 cc. of a buffered solution of sodium citrate or saline such as is used to overcome the vascular crises of thrombo-angiitis obliterans.

A frequent recurrence of short but severe acute attacks of cardiac pains with persistent soreness constitutes a status anginosis. This may require more than the usual and stronger sedatives than barbiturates and the most powerful vaso-dilators to relieve the nervous tension and interrupt the recurrent seizures. In such instances a general anesthetic has occasionally been employed.

The prevention of the recurrence of the attack is quite important. In this connection, the regular use of barbiturates, such as phenobarbital in ¼ to ½ gr. doses 2 to 3 times daily, is usually sufficient to keep the threshold of excitation high. The newer xanthines, particularly the aminophyllin, and dimethylxanthine, given in adequate dosage of 3 gr (0.28) 3 to 4 times a day seem to have more than a psychotherapeutic effect and prevent the rapid recurrence of attacks. I still employ these drugs in spite of the discouraging reports made by the New York group.

Total thyroidectomy as a means of preventing recurrent cardiac pains was in vogue for a short time but has gradually been abandoned and is now used only in occasional selected cases. Likewise bilateral dorsocervical sympathectomy from the fifth dorsal to the seventh cervical as performed by J. C. White, has been apparently successful, but the operation was too extensive. In apparently few cases was the exposure of the patient to such an heroic procedure warranted. Infiltration of sympathetic ganglia with alcohol has been revived and has been successful. Alcohol frequently causes intercostal neuritis and my brother, L. G. H., has therefore substituted 95% novocaine as the infilterating sedative.

Coronary Occlusion With Myocardial Infarction

The excruciating pain of a coronary occlusion should be relieved as promptly as possible. Morphine sulphate is the drug choice, in ¼ gr. doses by hypodermic, repeated in 15 minutes if necessary. Often ½ gr. is necessary but occasionally a ¼ gr. dose does suffice. If an individual is known to be sensitive to morphine, or if he has considerable vomiting following the injection of the first dose, it is probably advisable to try some other narcotic. Under such circumstances pantopon 1/3 gr., or dilaudid in 1/16 gr. may be tried. Dilaudid has the advantage that it affects the gastrointestinal tract less, but the disadvantage that it occasionally depresses the respiratory center too much. Status anginosis calls for the more heroic slow intravenous administration of 7½ gr. (0.5 gm.) of aminophyllin, diluted in 10 cc. or more of 50% glucose, or 300 cc. of warm buffered citrate or saline solution. Infiltration of ½% novocaine injection into the ganglia from the fourth dorsal up to the third cervical may be necessary to relieve the pain.

In an acute attack of coronary occlusion the state of shock may be considerable, with extreme dyspnoea and cyanosis. These should be combatted with heat and with concentrated atmospheres of oxygen under pressure, particularly in the presence of pulmonary edema. After the acute attack has subsided the patient must be kept at absolute rest in bed. Sedatives, as a barbiturate, particularly phenobarbital, should be administered at regular intervals. If the patient has eaten recently the stomach should be washed out with the large tube and warm water. Complete nursing service should be provided to relieve the patient of every effort, even that of feeding himself. He must not be allowed to raise a hand or turn himself.

Complications such as abdominal distention must be controlled from the very beginning. A buffer solution of sodium lactate taken regularly with the fluid feedings may help in this matter. The insertion of a rectal tube and the application of turpentine stupes may aid in the expulsion of gas from the large gut. The gastric and colonic ileus seems to be the result of the bombardment of the sympathetics from the zone of cardiac involvement. The most promising procedure is the use of an estrogenic hormone in 10,000 unit dosage in oil, in the hope of stimulating the parasympathetic system and re-establishing some semblance of balance between the sympathetic systems. We can not only hope for relief of the paralytic ileus, but also expect vasodilatation. The effect of the estrogenic substance on the pituitary and the diencephalon and secondarily upon the vasomotor center usually results in a widespread vasodilation which is describable, particularly if it spreads to the coronary bed. Theelin has been shown to be one of the most powerful vasodilator substances in young women with spastic conditions in the arterial system of the extremities.

If the patient happens to be suffering from diabetes mellitus a coma regime with the low carbohydrate barley water should be immediately instituted and protamine zinc insulin used with care. The ordinary patient should be put on liquids only for the first three or four days; partial starvation may have some advantage. Fruit juices fortified with glucose are usually well tolerated. Regular doses of ½ oz. of whiskey form a good supportive measure. Amino-acetic acid, glycocoll is a specific dynamic protein stimulant and in small 15 gr. (1.8) doses may aid in the essential creative metabolism.

The appearance of frequent ventricular premature contractions and paroxysms of ventricular tachycardia call for the use of quinidine in 5-gr. doses every hour until the mechanism has stopped. Extreme congestive failure may follow extensive myocardial infarction; under such circumstances the patient should be given the benefit of prompt venisection. Edema should be removed by diuresis with mercupurin. Digitalis is usually withheld but is indicated if there has been precipitated a condition of auricular fibrillation.

Prognosis after coronary occlusion depends upon the evidence of the extent of the myocardial infarct. Convalescence is slow; at least six weeks, and preferably eight weeks of absolute rest in bed should be insisted upon, with nothing more than passive exercises and massage.

Congestive Heart Failure

Whenever evidences of organic heart disease are discovered, steps should be taken immediately to prevent, or at least postpone, the advent of congestive failure. Prophylaxis consists in the removal of the etiological factors insofar as it is possible to do so. Hyperthyroidism, is, of course, amenable to medical and to surgical treatment. Syphilis should be completely eradicated in its early stages, as soon as possible; if old and chronic, great care must be exercised and only mild treatment is safe. Rheumatic fever is still an unknown quantity etiologically, but should be attacked with the means that are available, namely the salicylates and rest. Where there is any evidence that there has been a rheumatic carditis or valvulitis the patient should be kept in bed for nine to ten months, in the hope of preventing the overproduction of scar tissue formation and fusion in the damaged valvular tissues.

Hypertensive arteriolar disease recently has been arrested in about one out of every four young individuals who have been subjected to bilateral splanchnectomy. Medical treatments with sedatives, vasodilators and hormones should always be given a trial but our successes are far from encouraging. Arteriosclerosis, or the degenerative process in the arteries and arterioles, is still the chief problem of modern preventive medicine. Infectious diseases should be respected as possible contributors to this type of vascular disease. Hypercholesteremia calls for a sharp decrease in the fat content of the food in order to minimize the tendency to imbibation into the intima and the formation of atheroma.

Prevention of Myocardial Insufficiency

The factors that are known to precipitate heart failure should be controlled. A patient with asymptomatic heart disease should be warned against the dangers of over-exertion and the ill effects of acute and chronic infections, particularly when they are not accorded the proper care. Exercise and exertion should be kept at a minimum in potential cardiac invalids, in order to restrain the stimulus to myocardial hypertrophy. Factors that contribute to the development of coronary sclerosis, particularly high fat diet and perhaps tobacco in hypersensitive individuals, should be eliminated. The coronary sclerosis patient must be advised against overloading the stomach, taking foods to which he is allergic, dehydration, the neglect of infections, undue physical strain, and anything that might precipitate thrombosis in the coronary arteries.

Pathophysiology of Cardiac Insufficiency

Fundamental pathophysiological processes are at work in congestive heart failure. The chief disturbances of the vital processes, the primary cause of which is the lack of oxygen, should be kept in mind. The fact that in the presence of anoxemia the heart muscle of experimental animals showed the chemical changes similar to those generally found in the heart muscle of humans dead of congestive failure, namely losses of creative and phosphates, must be taken into consideration in therapy. In our experimental studies we were only able to get suggestive evidence that th amino-acids — glycocoll, alanine, glycocyanine, and arginine—did anything more than maintain the total creatinine level in the heart muscle. It was interesting to find that digitalization of the rabbit's heart seemed to conserve the total creatine content of the myocardium. In the same studies tnere was a suggestion, but nothing so striking as reported by Cloetta, that the daily administration of digitalis curtails to a slight extent the development of the hypertrophy.

The administration of amino-acetic acids to some of our most refractory cases seemingly increased strength of the individual patients, removed the sense of extreme exhaustion and occasionally aparently turned the tide and helped some in the restoration of the circulatory equilibrium. The results may have been the general protein-stimulating effect of the amino-acetic acid.

Oxygen

The chief want in the failing myocardium is for oxygen. The transporting of inadequately oxygenated blood is an added burden on the circulatory apparatus. Placing the decompensated individual in a highly concentrated atmosphere of oxygen helps to some extent in freighting the blood with the maximum amount that it can carry. The myocardium will be improved by the supersaturated oxygenated blood.

The indirect methods of bringing oxygen to the heart have been invoked in the use of coronary vasodilators. For a good many years the xanthines have been used for their supposed dilating effect upon the arterioles not only in the kidneys but also in the heart, to insure the maximum oxygenation of the tissues. This pharmacologic action has been recently questioned.

XANTHINES

Theophyllin seems to have superseded all other authine derivatives. Aminophyllin was found experimentally by Fred Smith to increase the coronary flow and clinically by Harrison and his group measurably improve to circulation in cardiac patients. The experimental evidence and the clinical support of the possible beneficial effects of the xanthines have been refuted. Gold and his associates, after the study of anginal cases, concluded that the xanthines have no vasodilating properties. The estrogenic substances described above may well have general vasodilating effects. It must be remembered, however, that most of the patients in this group are aged and have arteries and arterioles that are not so easily dilated as they were once upon a time.

SUPPORTIVE TREATMENT

Specific therapeutic considerations in the treatment of patients with congestive heart failure can be divided into two groups: (1) those that are indicated in an acute emergency and (2) those that are of value in chronic states as supportive measures. Venisection is the traditional method for tiding the patient over a crisis. It is perhaps not employed so often as it should be in present-day practice. When the neck veins and the liver are engorged the removal of half a liter of blood quickly removes a great load from the heart and is a lifesaving measure. When there is pulmonary edema, additional forced oxygen administration under the pressure, in at least 50% concentration is life-giving and helps greatly in the reestablishment of the circulation.

Mechanical embarrassment to the heart's action and to the respiration in the form of hydropericardium and hydrothorax and ascites should be carefully removed by paracentesis. Care should be exercised so as not to produce too great a shock. If congestive failure is accomplished by too rapid or too slow a heart rate, or a mechanism disorder the disturbances should be promptly controlled as outlined above by carotid sinus pressure, acetylbetamethylcholine, quinidine, paradrine, or digitalis.

Morphine sulphate is perhaps the most valuable drug that is available in the treatment of congestive heart failure. Its administration in ¼ gr. doses relieves the distress and anxiety, and particularly the overstimulation of the respiratory center. It relieves the terrific exertion of dyspnoea, and in that way helps to break the vicious circle. It insures REST, which still takes the place of pre-eminence in the routine management of a cardiac invalid. Rest must be complete and prolonged, not only physical but also mental. Every effort should be made to keep the patient absolutely comfortable. A cardiac bed and a cardiac table should be provided if it is possible to do so.

The diet should contain adequate protein of good biological character such as delicate meats, fowl, fish and dairy products. It is desirable to keep the salt content at the very minimum, which is about two grams a day. The carbohydrate content should be high unless the patient happens to be a diabetic, or unless there seems to be too much tendency toward gas formation. Foods that are poorly tolerated should be eliminated. The fat content of the diet should be kept at a low level. In the presence of edema it may be necessary to attempt to upset the water balance by prescribing for a few days the inadequate Karrell diet of four glasses of milk only modified by the addition of crackers to produce acid ash. High potassium-containing foods are also desirable. The continental 1500-gram raw fruit and vegetable diet has not been widely accepted as yet in this country.

The treatment of edema by the use of brisk saline catharsis is no longer in general use because it is too drastic. The effort of getting on the bed pan is frequently exhausting. The removal of edema fluids by diuresis is now considered to be preferable. It may be accomplished by rest in bed only and is enhanced by the administration of digitalis. The ingestion of acid salts, as ammonium chloride, ammonium nitrate, or potassium chloride, in doses of 4 to 6 grams (60 to 90 gr.) a day, or the feeding of urea in amounts of 10 to 30 grams (½ to 1 oz.) a day may alone inaugurate and maintain diuresis, but usually prepare the patient for the more active diuretics. The edema that is refractory to these measures will usually respond to the administration of the intravenous mercurial or combined mercurial and xanthine preparations, as mercupurin or salyrgan in 1 cc. or 2 cc. (1½ to 3 gr.) doses injected intravenously.

Digitalization is, of course, the first indication in congestive heart failure and may be accomplished by administering within 24 to 48 hours an amount of the drug containing a cat unitage totaling about one cat unit to every four Kg. or 10 pounds of body weight. The standard tincture of digitalis contains 1 cc. equal to 1 cat unit. The standard powdered whole leaf pills or capsules are so made up that 0.1 gram (1½ gr.) equals 1 cat unit. Lately a 1-gr. tablet containing one cat unit has been marketed. The intravenous or intramuscular methods are rarely necessary, and the massive dose method of administration is no longer used but the rapid oral method is usually successful. As a rule, 4 pills of 1½ gr. each of P. W. L. digitalis may be given safely at four-hour intervals for three or four doses, and then two pills at six-hour intervals until diuresis is accomplished, the pulsus deficit disappears, or nausea is noted.

Some of the newer and more powerful digitalis glucosides have some advantage. Digitaleine crystallisee, of Nativelli, was isolated in 1868 but was not introduced until rediscovered in 1920 by Cloetta, who identified it as digitoxin. It is used in doses of 1/600 gr. (0.1 mg.), equal to 1½ gr. of the physiologically standardized P. L. D. Of the newer preparations more recently marketed, verodigen, or gitalin (amorphous) is likewise highly concentrated but only about half as much so as the previous preparation, a dose of 1/240 gr. (0.25 mg.) being equal to 1½ gr. (0.1 gm.), the standardized P. L. D. This is a preparation of the extract of the digitalis purpurea. Within the last few years the Austrian or Balkan digitalis lanata was found to yield cardiac glucosides, digilanids, that were more effective than those obtainable from digitalis purpurea. Careful studies of the chemistry of the glucosides showed that the digitalis lanata contained, in addition to digilanid A and B which could be obtained by hydrolysis of the digitalis purpurea a digilanid C, from which Sidney Smith isolated digoxin, a powerful, promptly acting crystalline glucoside. Digilanids, combined are such that 1/3 mg. (1/100 gr.) is practically equal to one cat unit, or 1½ gr. (0.1 gm.) of the standard powdered leaf. Digoxin has not been standardized by the biological cat method, but is supplied in tablets of 1/240 gr. (0.25 mg.) and ampules containing 1/60 and 1/40 gr. (1 to 1.5 mg.), which is sufficient to digitalize a patient. The patient requires, however, at least 1/120 gr. (0.5 mg.) a day for maintenance. The cat unitage of this preparation should be established. The manufacturers, however, insist that it is not necessary to do so since the biological standard is variable, whereas their preparation as a pure chemical substance can be weighed out without difficulty, thus insuring uniformity in dosage. It is still desirable, however, that the cat unitage should be established. In order to maintain uniformity the tablets should be made up so as to contain one cat unit.

XANTHINE DIURETICS

Xanthine, purine or vegetable diuretics have long been popular in cardiological practice. Caffeine has not been employed as a diuretic because of its stimulating effect upon the central nervous system. Theobromine salts were most widely used a decade ago, but now theophyllin preparations seem to have gained preeminence. Diuretin, one of the early German preparations to be popularized, is chemically theobromine sodium salicylate; its dosage is 15 gr. (1 gm.) t. i. d. Attempts to improve this drug have been made — theocalcin, which is theobromine calcium salicylate, seems to be a slightly better diuretic and is definitely less irritating to the stomach. Theocalcin is likewise given in the same dosage of 15 gr. (1 gm.) t. i. d. I have always felt that the theophylline preparations are more effective than the theobromine salts, but at the same time they are more irritating to the gastric mucosa. Theocin, one of the pioneers in the field, is synthetic theophylline sodium salicylate; the dosage is usually 5 gr. (0.3 gm.) t. i. d. Again attempts have been made to decrease the irritating effects, and calcium has been substituted for sodium, and the calcium salicylate theophylline is marketed as phyllicin, with a dosage of 7½ gr. (0.5 gm.) t. i. d.

The most recent preparations that have been found to be most effective and have been used quite extensively as vasodilators, as well as diuretics, have been made up of the alkaloid theophylline in ethylene diamine. Such preparation was introduced in Germany as euphylline, or metaphyllin; in this country as theophylline and aminophyllin. The dosage of aminophyllin should be 3 gr. (0.2 gm.) t. i. d. by mouth. Ampules containing 4 gr. (0.25 gm) of aminophyllin, in 10 cc. of solution for intravenous use, and 7½ gr. (0.5 gm.) in 2 cc. for intramuscular can be obtained. The latter may be diluted to 10 or 20 cc. with glucose solution for intravenous injection. Aminophyllin also has a tendency to irritate the stomach in some individuals. This often constitutes quite an objection to its administration. Glucophylline, or theophyllin in methylglucamine, has been prepared, marketed and promoted as a less irritating theophylline. G. D. Searle & Company, the originators of aminophyllin in this country, have developed a new preparation made up of 8 chloro 1/3 dimethylxanthine, which seems to be far less irritating than any other theophylline preparation. I have used dimethylxanthine now for more than a year in all patients who have had gastric upsets from aminophyllin, and in 3 gr. (0.2 gm.) doses t. i. d. by mouth, or intravenously in 7½ gr. (0.5 gm.) it has been well tolerated in every instance.

MERCURIAL OR HEAVY METAL DIURETICS

Organic mercurial preparations, such as novasurol, were introduced for the treatment of syphilis; while it was being administered to a syphilitic, aortic-disease patient with congestive failure, it was noted that there was a powerful diuretic effect. It was discarded as anti-syphilitic but accepted as a diuretic. Novasurol, however was found to be quite toxic in several instances, and after a short period of popularity it was replaced by salyrgan which is far less toxic. Salyrgan rarely causes colitis, but apparently still occasionally produces sharp renal irritation.

In our extensive studies of the mechanism of diuresis following the use of xanthines and mercurials, we concluded that the xanthines acted by increasing the glomerular filtration due, we surmised, to a dilatation of the glomerular tufts, while the mercurials acted by decreasing tubular reabsorption. We were struck by the fact that if the mercurials and the theophyllins were used within a very few hours of one another, or simultaneously, there was a great augmentation of the diuresis. We concluded that the happy result was due to the fact that both mechanisms of diuresis were invoked, causing increased glomerular filtration and at the same time decreased tubular reabsorption. We therefore recommended the use of half doses of salyrgan along with full doses of theophyllin ethylene diamine.

Foldy, of the Chinion Laboratories, while working on the development of a new and less toxic organic mercurial diuretic, chanced to add, for neutralization, the slightly acid theophyllin to an irritating alkaline sodium camphoric acetate of mercury. He found not only that the combination was less toxic but also that the diuretic property of the salt was enhanced. The combination was put to clinical trial as novurit in Europe and introduced into the United States as mercupurin, supplied by Campbell Products Co., of New York, for intravenous use. The mercury salt without the theophylline was put up in suppository form as mercurin. Recently the Winthrop Company has introduced combinations of salyrgan and theophyllin for intravenous use and have also prepared a salyrgan suppository. We have found the latter to be too irritating to the rectal mucosa, and the ampule to have no advantage over the mercupurin.

Our clinical results in an extensive comparative study are given in the Table and show conclusively that the combination mercurial and theophyllin preparations are superior diuretics. In only one instance in this series did we feel that the brisk diuresis had been harmful and had contributed to a toxic accumulation of the nitrogen waste products in the blood plasma.

COMPARATIVE STUDIES OF THE DIURETIC POWERS OF INTRAVENOUSLY ADMINISTERED MERCURIAL AND XANTHINE PREPARATIONS

No. of Injections	Drug	Av. % Increase 1st Day	Av. % Increase 2nd Day	Av. % Increase 3rd Day	Av. % Increase Total
378	Mercupurin	522.6	189.3	99.4	810.6
125	Salyrgan	340.6	120.2	61.5	826.2
21	Theophyllin & Salyrgan	487.1	216.2	95.5	806.0

The rehabilitation of the cardiac invalid just begins after the successful dissapation of the edema. Rest in bed must be continued as long as it is economically possible to indulge in it. Sitting up in bed, massage, and passive exercises should be gradually increased after the second week. The legs may be dropped over the side of the bed for longer and longer periods after the third week. It is to be rememberd that the assumption of the upright position is quite a strain and this must be undertaken slowly. After this a few steps more are taken each day and the increasing physical load is gradually assumed. Graduated simple exercises may be helpful, but in no patient who has suffered heart failure should we hope to accomplish more than rehabilitation of the individual for the very minimal activity necessary to carry on the most sedentary existence.

Hypertension and Its Surgical Treatment*

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THE TREATMENT of hypertension by operation on the sympathetic nervous system has stimulated a new interest in the etiology and treatment of this condition. While statistics may be misleadng, it has been assumed that 15 per cent of all adults have hypertension and that 23 per cent of all deaths in patients older than fifty years are directly attributable to this disease. Furthermore, cardiovascular-renal disease, of which hypertension is an important factor, causes more than four times as many deaths as does cancer and although reliable figures are not available, hypertension apparently accounts for significantly more deaths each year in the United States than does either cancer or pneumonia. Hypertension is, therefore, one of the most common and most serious conditions that physicians are required to treat and any innovation that tends to lessen the mortality should be given careful consideration.

Arterial hypertension may be defined as a condition in which the systolic blood pressure of adults has a value in excess of 140 mm. or the diastolic blood pressure of adults has a value in excess of 90 mm. of mercury, or both the systolic and diastolic blood pressure of adults are increased above these respective figures. It is probably true that the blood pressure does not normally increase after maturity but the blood pressure of infants and children is significantly lower than that of adults.

The treatment of hypertension has been complicated by the erroneous opinion that the elevation of blood pressure is not a disease but a symptom and that the elevation of blood pressure in essential hypertension is beneficial and necessary for normal functioning of organs such as the kidneys. Our study of patients whose blood pressure has been reduced to normal by operation indicates that the kidneys function as efficiently as, or even better than, they did when the pressure was high. In our experience there is no basis for the belief that patients feel unwell when the blood pressure is reduced in essential hypertension, and we are convinced that it is extremely desirable to lower the blood pressure in all cases where it is significantly altered.

Hypertension may be divided into two main groups: secondary and essential hypertension. Secondary hypertension results from such lesions as pyelonephritis, glomerulitis, hydronephrosis, coarctation of the aorta and tumors of the suprarenal glands. Primary renal lesions should be excluded by careful study, particularly intravenous urography, for removal of a diseased kidney may cause the blood pressure to return to normal.

Coarctation of the aorta should always be suspected in young individuals with hypertension. This congenital anomaly is characterized usually by normal or low blood pressure in the lower extremities (normally the blood pressure in the lower extremities is significantly higher than it is in the arms), palpable arterial pulsations or bruit in the intrascapular region, and diminution in strength of pulsations in the arteries of the lower extremities. Roentgenograms of the chest may show absence or deformity of the aortic shadow and erosion of the ribs due to development of the large collateral arteries.

Tumors of the suprarenal gland causing hypertension are rather rare. Those of the medulla or medulla-like tissue are characterized by paroxysms of hypertension, which manifest themselves clinically as episodes of epigastric or substernal pain, pallor, palpitation, tachycardia and marked increases in the blood pressure. Hypertension associated with tumors of the suprarenal cortex is not paroxysmal in type. Obesity, hirsutism, deep voice and amenorrhea may be associated changes. Ordinarily the potassium in the blood is low and the sodium is high. One should always suspect tumors of the suprarenal glands as well as primary renal lesions in cases of hypertension but these tumors are seldom found.

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*Address before the Central Mississippi Medical Society, Jackson, Miss., March 7, 1939.

Secondary hypertension then is the elevation of the blood pressure that can be attributed to some associated lesion or other condition of the body, whereas essential hypertension is an elevation of the blood pressure in which there is no evident cause or etiologic factor.

In essential hypertension much more is known about the mechanism of the elevation of the blood pressure than is known about the etiologic factors. Three factors are responsible for maintaining normal blood pressure and any derangement of these three may result in elevation of the blood pressure. The cardiac output, the increased volume or viscosity of the blood and increase of the resistance offered to the flow of the blood through the peripheral parts of the arterial system, control the blood pressure. It has been proved that cardiac output or viscosity of the blood is not altered in essential hypertension but that the caliber of the peripheral vessels is narrowed. The situation is comparable to a garden hose to the end of which a nozzle is attached. If one decreases the diameter of the opening of the nozzle, pressure within the hose increases, as is shown by the greater distance to which the stream is thrown. The decrease in diameter of the peripheral vessels is due to (1) an inherent status of the arterioles and (2) abnormal reaction of the arterioles to vasomotor stimuli. Wide fluctuations of blood pressure would indicate an abnormal response of the arterioles to vasomotor stimuli. A high sustained blood pressure with little fluctuation indicates an inherent or automatic constriction of the arterioles.

There is a large hereditary factor in essential hypertension as revealed by Ayman, who found that in families in which both parents had absolutely normal pressure the incidence of elevated blood pressure among the children was only 3 per cent. In families in which one parent had hypertension the incidence rose to 28 per cent and in families in which both parents had arterial hypertension the incidence was 45 per cent. Hines has shown that a positive family history of hypertensive cardiovascular disease is five times as frequent among individuals who have hypertension or who are hyperreactive to a standard stimulus (immersion of hand in ice water) than it is among individuals who react normally to the test. The exact inherent quality responsible for this is not known but it is probably a hyperreacting sympathetic nervous system, which responds abnormally, producing unusual vasoconstriction as a result of various emotional stresses and strain.

Hypertension that has been experimentally produced in animals has some characteristics of essential hypertension in man. Goldblatt has produced hypertension by diminishing blood flow to the kidneys of dogs by means of clamps applied to the renal arteries. The hypertension in dogs closely resembles that of man but complete evidence that it is the exact counterpart is entirely lacking. Those who have accepted the identity of Goldblatt's hypertension in dogs and essential hypertension in man believe both are due to some chemical or hormonal substance. Up to this time, there is no concrete evidence that essential hypertension is due to an abnormal pressor substance and, reducing the etiology of essential hypertension in man to its simplest form in the light of our very inadequate knowledge of the subject, heredity and the stresses and strains of life seem to be the most important factors.

Essential hypertension has been classified into four groups (Keith and Wagener):

1. Slight to moderate increase in the blood pressure, which ordinarily becomes normal as a result of rest. Mild sclerosis of the retinal arteries. There are usually no symptoms.

2. Moderate to severe hypertension, moderate sclerosis of the retinal arteries. Occasionally venous thrombosis. Clinical symptoms are present or absent.

3. Moderately severe hypertension and angiospastic retinitis. Almost always clinical symptoms of hypertension.

4. Severe hypertension, angiospastic retinitis, edema of the optic disks. Always clinical manifestations of hypertension.

This grouping does not indicate the degree of hypertension although the blood pressure is frequently higher in one group than it is in the one that precedes it. Patients may progress from group to group until they reach group 4. Mortality among patients who have hypertension groups 1 and 2 is 30 and 42 per cent respectively in four years. Mortality among patients who have hypertension group 3 is 78 per cent in four years and in group 4 it is 98 per cent (Keith). This high mortality should be noted carefully by those who are inclined to consider that hypertension is not ordinarily a very serious disease. Malignant hypertension and essential hypertension are not separate conditions, for malignant hypertension is a type of essential hypertension. The term "malignant" is used loosely in designating severe forms of hypertension.

Medical treatment of hypertension is ordinarily unsatisfactory over a period of years. It has been stated that a great many preparations reduce blood pressure in essential hypertension; however, on close examination it is evident that in most of these instances the diminution of the blood pressure supposedly resulting from a specific remedy occurred only as a part of the usual wide fluctuations of blood pressure in essential hypertension. Such drugs as are available for the reduction of blood pressure usually possess unpleasant side effects or short action. The specific need in the medical treatment of hypertension is a drug which will produce vasodilatation over a comparatively long time (three to six hours) and which does not produce harmful or unpleasant side effects.

Sodium nitrite and sodium nitrate, purine derivatives (for example, theobromine and theophyllin), iodides and tissue extracts (for example, padutin, liver extract and adenosine) are of little or no value in the treatment of hypertension. Occasionally when hypertension develops during the menopause, there may be reduction of it as a result of the administration of theelin or progynon. However, it is inadvisable to continue to treat such patients over long periods with these hormones for the purpose of reducing the blood pressure unless a definite reduction of the blood pressure can be shown to follow adequate dosage rather promptly. Of all the drugs commonly used in the treatment of hypertension, the sedatives are the best and of these phenobarbital is as good as any. The ideal sedative is one that reduces nervousness and irritability but does not interfere with the essential cerebral activities. Ordinarily, ¾ to 1½ grain (0.5 to 0.1 gm.) of phenobarbital three times a day is advisable.

Comparatively recently a new drug has been introduced for the treatment of essential hypertension. Its action is uncertain but it is supposed to produce peripheral vasodilatation. Potassium sulfocyanate is the drug and Barker has shown that the blood pressure in about 50 per cent of hypertensive patients is reduced by careful treatment with potassium sulfocyanate. The amount of this drug that is administered orally should be determined by frequent calculations of the concentration of cyanates in the blood. The concentration in the serum should range between 8 and 12 mg. in each 100 cc. of blood. As little as 3 grains (0.2 gm.) or as much as 12 grains (0.8 gm.) of potassium sulfocyanate must be administered each day to cause this concentration in the blood. Barker has described a method for determination of cyanates in the blood, which has been modified by Griffith and Lindauer. Such symptoms as headache, insomnia and nervousness may be relieved according to Barker when the blood pressure is reduced. Fatigue, macrocytic anemia and enlargement of the thyroid gland may occur even if administration of the drug is well controlled. If concentration in the blood is too great, lethargy, mental confusion, weakness, difficulty of speech, skin lesions and collapse may occur.

Our experience with the use of sulfocyanate in the treatment of hypertension has been somewhat limited but relief of symptoms such as headache is frequently striking. There is definite reduction of blood pressure in some cases. It is advisable to continue well controlled treatment for about three months before a decision is made that the treatment is of no value, as blood pressure may decrease slowly in instances in which it is reduced at all. Potassium sulfocyanate should never be administered over a long period unless the amount administered is based on studies of concentration of cyanates in the blood. It is imperative that the physician prescribing sulfocyanates familiarize himself with the literature on the subject before treating the patient with the drug. Not only does the administration of potassium sulfocyanate help patients who have not had operation but in some of the cases in which little or no benefit has been obtained from operation, the postoperative administration of potassium sulfocyanate has been followed by most gratifying results. In some cases in which potassium sulfocyanate was administered before operation without benefit, the administration of the drug following extensive sympathectomy has produced marked lowering of the blood pressure.

Rest and the reduction of nervous stresses and strains are important in the treatment of many patients with essential hypertension. In general it is advisable for patients with hypertension to obtain nine hours of rest in bed at night, to lie down for an hour or an hour and a half in the middle of the day, to take vacations frequently, to acquire a calm, philosophic outlook on life and to avoid nervous stresses and strains. Young individuals who follow occupations that are strenuous may well consider it advisable to follow an occupation that is more restful.

Many diets have been advised in the treatment of hypertension but there is very little evidence that diet influences blood pressure. We do not feel it advisable to restrict protein or salt in diets of hypertensive patients. Individuals who are overweight should reduce, for obesity throws an additional strain on the heart by increasing the work that the heart must do and as a result of deposition of fat in heart muscle and around the heart. Restriction of alcohol and coffee is not imperative unless they serve as stimulants. They do not themselves increase the blood pressure appreciably. Smoking increases greatly the blood pressure of many patients with hypertension and if this can be demonstrated by having the patient smoke after his blood pressure has reached a basal level it is well to consider sharp restriction or complete elimination of smoking.

The surgical treatment of hypertension is based chiefly on the presumption that the increased arteriolar tone can be released by operation on the sympathetic nervous system, thus lowering the blood pressure. Arteriolar tone can be diminished by sympathectomy as has been established clinically in the treatment of Raynaud's disease and thrombo-angiitis obliterans. Extensive sympathectomy produces two other effects that may be of value in the treatment of essential hypertension: namely, an increase in the blood supply to the kidneys and prevention or diminution of spontaneous release of epinephrine from the suprarenal glands. If the hypertension experimentally produced in animals by Goldblatt is comparable to essential hypertension in man, extensive sympathectomy is designed to destroy the sympathetic innervation of the kidneys and thus increase the blood supply to them. We believe that sympathetic denervation of the suprarenal glands, which is accomplished as part of the procedure of extensive sympathectomy as performed at The Mayo Clinic, is probably not of value in any way other than that it diminishes or prevents episodes of marked release of epinephrine from the adrenal glands. Whether extensive sympathectomy is more valuable in the treatment of essential hypertension than is partial sympathectomy, such as supradiaphragmatic splanchnicectomy (Peet) or celiectomy (Crile), we do not know, but the former is a more logical procedure, for it relieves sympathetic control of the kidneys and the suprarenal glands as well as that of the intra-abdominal regions and that of a large portion of the lower extremities.

At the recent International Surgical Congress in Brussels there was a symposium on the surgical treatment of arterial hypertension. From the discussion, stimulated by the papers presented, it was evident that the surgical treatment of hypertension has proved of value in most clinics. Three factors in the causation of essential hypertension were stressed: namely, suprarenal, renal and vasomotor. Hereditary, constitutional and psychic factors, as well as the factors linked with certain hyperexcitable conditions of the sympathetic nervous system were also stressed.

The futility of carrying out extensive sympathectomy in cases of hypertension in which there is irreparable damage to the cardiovascular mechanism is apparent. Nor should operation be considered in a case in which there is mild and slowly progressive disease that is amenable to medical treatment. Operation seems most efficacious in the definite vasospastic type of hypertension, in which sharp and brisk rises in blood pressure occur when the hands are immersed in cold water, and in cases in which a marked fall in blood pressure is produced when pentothal sodium, sodium amytal or a nitrite is administered. As an average rule, the patient must be under fifty years of age and the hypertension must be classed as of group 2 or 3.

The contraindications for operation are congestive heart failure, angina pectoris, marked renal insufficiency and advanced arteriosclerosis.

The operative mortality is practically negligible and while some of the patients eventually die, operation seems to have neither hastened nor delayed their deaths. Our experience with 237 patients on whom operations have been carried out without an operative death has demonstrated that the operation, as performed at The Mayo Clinic, after careful examination and selection, has a definite place in the treatment of essential hypertension. The symptomatic relief following operation has exceeded the effect on blood pressure. The proportion of cases of patients relieved of headaches when the effects of the operation on the blood pressure was recorded as good, fair or failure was as follows: 100, 80 and 76 per cent, respectively. Nervousness was relieved after operation when the effect of operation on the blood pressure was recorded as good, fair or poor, in 80, 66 and 67 per cent of cases, respectively. The proportion of patients relieved of nonanginal pain in the left side of the thorax after operation when the effects of operation on the blood pressure were recorded as good, fair or poor, was 90, 75 and 60 per cent, respectively. These figures bear out in a striking manner isolated clinical observations that patients are frequently relieved of such distressing symptoms as headache, in spite of the fact that reduction of their blood pressure does not seem apparent. The results of the operation for hypertension were: failure, 20 per cent; temporary relief, 28 per cent; fair, 28 per cent, and good, 24 per cent.

The women received good or fair results from operation in a slightly higher proportion of cases than did the men, the percentages being 55 and 48, respectively. The duration of the hypertension before operation did not significantly influence the effect of operation. In contrast to previous conceptions of the influence of age, this factor did not seem to influence the good or fair results, although patients in the third decade of life received a slightly smaller percentage of good or fair results than did those in the fourth, fifth and sixth decades.

In analyzing our results in the surgical treatment after extensive sympathectomy, it is evident that fixed rules with regard to the selection of cases for operation are difficult to formulate. In general it can be said that patients will probably get good results from operation when diastolic blood pressure decreases to less than 110 mm. of mercury as a result of rest, administration of sodium amytal and injection of pentothal sodium and when sclerosis of the retinal arteries is absent or slight. Also the probabilities that a patient will secure good results from operation are small in the presence of advanced sclerosis of the retinal arteries and when the maximal diastolic blood pressure exceeds 150, or when the diastolic pressure does not decrease to less than 120 as a result of rest, intravenous injection of pentothal sodium or administration of sodium amytal. It has been demonstrated that operation can be carried out safely. It does not disable and it frequently produces remarkable effects on blood pressure. In the light of these facts, we believe that operation should be performed on patients whose hypertension is mild, particularly if blood pressure is progressively elevated.

In analyzing our results it is apparent that we have been inclined to wait and delay operation in those cases in which mild hypertension shows a tendency to progress. It is to prevent serious consequences that some remedy is desperately needed and while sympathectomy may not be the ideal remedy, there is much evidence that it may prevent or delay complications that all too frequently cause death in the most productive periods of patients' lives.

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What the Present Trend Toward Socialized Medicine Is Going to Do to the General Practitioner*

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IN SPITE OF the frantic opposition of organized medicine and good sound logic, the trend toward more and more governmental support of medical treatment continues apace. It seems that we may soon face the accomplishment of a public attitude toward medical service comparable with the attitude developed toward education a century ago. To most of us now it seems distinctly antisocial to suggest that all are not entitled to an opportunity to secure an education. The American public may soon reach the conclusion that everyone is entitled to the health protection that modern medical service affords. If the public is so persuaded, we shall have a wide-spread thorough-going, and long-continued attempt to provide health service through governmental agencies. That the service will be expensive and in part, at least, inefficient will not be an effective deterrent.

The arguments for socialized medicine by the economists and against it by the medical profession generally have been broadcast with such vehemence that everyone has heard them. I shall not reiterate the claims of either but shall confine myself to the discussion of the effects that will be produced upon the general practitioner if socialized medicine comes.

As a matter of fact, our government already is launched into the field of medical practice. Once disease was recognized as transmissible and preventable, organized, i. e. governmental, participation in the practice of medicine could be forecast. Sanitary engineering is a field in which governmental control is the only practical method of procedure. The medical profession as well as other public spirited citizens encouraged governmental control of sewage disposal and milk supply. It was just a step to pass from control of typhoid fever by sanitary engineering to its control by inoculation—eventually mass inoculation by governmental employees and without charge.

Why stop with contagious diseases? Other diseases due to poor obstetrics or early malnutrition or infected tonsils are preventable. Can the medical profession extend to all the benefits of good obstetrics and good pediatrics? It has not and cannot. Today there is widespread demand that no child shall be forced to enter upon the competitions of life handicapped by the ignorance or poverty of his parents—factors over which he has no control but which nevertheless deprive him of a fair chance at success before the race is begun. Already the federal government and some state governments have responded by appropriating sums annually for the promotion of maternal and child welfare.

It is this development of governmental participation in medical practice that seems to me to give the key to further governmental activity. Let us follow through the development of a federal program of maternal and child welfare as probably illustrative of all federal participation in medical care.

Federal funds will be channeled into states through the state health departments and then into communities through county or district health units. On account of the excellent progress already made in Mississippi in the development of county health units, such a program would become operative throughout this state at once.

The first step in the promotion of medical care for all might well be an attempt to provide good obstetrical care for every expectant mother regardless of her financial status with the state paying the bill if the family is unable to do so. Such care would include prenatal examinations and advice and treatment if indicated. It would also include a certain amount of postnatal care for the mother and the newly born infant.

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*Read before the Delta Medical Society, Greenville, Miss., April 12, 1939.

Objective public interest in this program of maternal welfare would be partly on behalf of the mother in the interest of her continued good health and her ability to continue as a housewife and as a mother. The greater public interest in maternal welfare, however, seems to me to be that a normal healthy child shall be born—not a child handicapped at birth by the progress of an abnormal pregnancy and a sick or ignorant mother.

It will be obvious at once that from the point of view of the child, the prospective citizen, normal good health at birth will be of little avail unless the child can be carried through at least the early years with protection against malnutrition and preventable diseases and disabilities and so a program of child welfare has been and will be welded into the maternal welfare program and an attempt made to see that every young child in the state of Mississippi has a chance to start life in good health and with as strong a body and as alert a mind as his inheritance from his parents will permit.

Now then, who will provide this obstetric service? Since the public health officer is neither especially trained nor experienced in obstetrics and pediatrics, the obvious procedure in attempting to provide widespread service in these fields is to establish clinics to which the health officer and his staff can direct patients and in which the medical profession of the community can render the professional service— probably excepting deliveries that would be made in the patient's home. Is the medical profession of this state able to do the job? Probably the profession is better equipped at this time in obstetrics and pediatrics than in any other branches of medical service. I say this, of course, because recently excellent postgraduate courses in these subjects have been given throughout the state and they were well attended. However, there doubtless are still a good many doctors unable to render acceptable service. More important than this is the fact that if all doctors available are equipped for the service there aren't enough doctors. According to recent statistics there is only one other state with a lower ratio of doctors to population than Mississippi. In communities in which the local profession could not meet such standards as would be set up, full-time federal doctors would have to be employed. If local physicians were used, they would be paid on a fee basis through the local health department.

At first glance such an extension of federal activity into the field of medical care has very definite advantages. It would be possible to start all children off with the best possible prospects of good health and so increase the likelihood that in the future they would have the strength and the energy to become productive members of society. Prospective mothers and those dependent on them would be spared a great deal of unnecessary suffering and ill health.

Physicians would not find it necessary to spend more or less of their time rendering services for which they could not expect compensation. Such patients would be referred to the public clinic and the service rendered there by the same physician but for a sure fee. The income of the doctor would be increased inasmuch as services heretofore rendered freely would be paid for. The quality of medical care might be improved since patients would be assembled at the clinic where more could be seen and where helpful equipment and assistance could be provided that would not be available in the patient's home and might not be provided in the doctor's private office.

So far, so good! But this rather rosy picture presupposes that patients as well as doctors are actuated by high motives. When such plans are transferred from paper to field, however, we find—as we already know—that each patient and each doctor is actuated by self-interest. Some individuals are just less intelligent and more greedy for immediate obvious benefits while others are willing to postpone immediate benefits if they can foresee future advantages.

An immediate difficulty would arise in determining which patients are eligible for service at government expense. One may say glibly that the indigent are elgible, but who are "the indigent"? If this is left to the judgment of the health officer, the way may be open at the beginning for personal favoritism and political pressure and control of health service would be a powerful factor in control of the state. Some standard would have to be attempted. I have no idea what the standard should be, but, for the sake of discussion, let me assume that those families would be entitled to service at federal expense in which the gross income is less than $500 annually for each adult and $100 for each child or unproductive dependent. A family of two adults and two children with gross income less than $1200 annually would be entitled to service.

By gross income I mean income of all kinds. In the case of farm families, this would include an allowance for rent of dwelling and of shelter for animals or crops; for land that supported not only cattle but hogs and chickens; and for products of the land, not only fuel but game and fish. A rabbit caught in a gum costs a rural family nothing, but it means as much to a rural family as it does to a family in the city. The city family has to spend 35 cents in cash or the stew has no meat in it.

If the standard is determined, how shall the health officer or other public officer decide whether a given family is receiving a gross income of $1200 or less? An accurate determination would require the employment of a skilled and expensive corps of social workers with the result that the sociological investigation would take most of the money provided for medical care. This would be intolerable, hence eligibility is quite certain to be determined roughly, i. e., with considerable dependence upon the judgment of some public official and considerable reliance upon the claims of applicant families.

The most satisfactory information would be gained if the selection of beneficiaries could be left to local authorities and the local governmental agency (the county) required to pay a considerable proportion of the cost. Such a plan, however, would run exactly counter to the main objective. Exactly those areas with the largest proportion of indigents would be least able to participate in the program. Consequently it is likely that local authorities will select the beneficiaries and the federal government pay the bill. Of course this system will place a premium on lax enforcement of standards. Local officers are likely to want as much federal money in their county as possible. Indigents in this sense will become a local asset.

When a family with an income of $1175 becomes a beneficiary, a family with an income of $1225 is likely to feel very keenly the urge to qualify also. In other words, families with marginal incomes will be induced strongly to urge their claims for benefits and so with the interests of claimants and local officers coinciding there will be a steady and substantial increase in the number of families recognized as indigent.

From this point on, our picture of federal service is not so rosy. The clinics will be crowded. There may be equipment and assistant personnel available. There may be an increase in assured fees to be collected. The doctor will be faced with a long line of expectant mothers or young children. Not much time will be available for each. The pressure on the doctor to hurry and clean up the day's list will be great. It will not be resisted long and the medical service will become routine and perfunctory and inefficient. It will be better than nothing, but conscientious physicians will be ashamed and helpless. Patients will be dissatisfied and develop an attitude of antagonism toward the doctor instead of cooperation.

As the list of eligibles at the clinic grows longer, the doctor's early glee at receiving compensation for all of his services is likely to be modified. Gradually families that have paid him standard fees as a private physician will show up at the clinic and claim his services at federal expense and for fees that are sure to be reduced substantially.

As the number of clinic patients increases, a time will come when it will be more economical for the federal service to hire full-time physicians instead of using the services of local physicians on a fee basis. Local doctors will then have to choose between becoming full-time federal employees with more patients than can be given good service or returning entirely to private practice with a reduced patronage available. Their choice will be dictated by the likelihood of finding enough private patients able and willing to pay for their services.

Thus in time it seems to me to be highly probable that private practice and federal practice will proceed side by side. In general, federal practice will pay low but sure salaries and render such service as local conditions will permit, the variables being the conscientiousness and ambition of the federal doctor and the crowding in the clinic.

In general, the more successful and ambitious physicians will be in private practice. Patients who cannot afford a private physician will go to the clinics. Those who can pay a physician will avoid the obstructions and delays and perfunctory services available at the public clinics. There are likely to be as many doctors in private practice as now, doing less work for about the same average income. There will be a sharp demand for substantial increase in the total number of doctors in order to staff the federal clinics.

Before closing I want to present for your consideration two problems that will be entwined with the development of federal medical service if it develops as I have indicated. The first is the fate of public health work as we now know. Ideally, and generally, this program is now confined to preventive medicine. This is a large and promising and productive field and progress in producing greater and greater efficiency and in training competent personnel in sufficient numbers has been gratifying. Generally speaking, the public health program as now established has accomplished much for the public good and if developed along the lines of strict conformity to prevention it promises far greater benefits to come.

Unfortunately the mere presence of a machinery already geared from federal to state to local communities offers the simplest and quickest and probably the most efficient method of distributing federal funds to local communities and controlling and accounting for expenditures. Federal authorities are likely to prefer this channel.

Unfortunately also, the initial effect of controlling and directing federal medical care is likely to be welcomed by public health officials. There would be a greater increase in authority and prestige and much more money to be spent by each official from the surgeon general to the county health officer. Allowing to each his average share of human vanity, he would feel competent to direct the program to the best ends. The public health personnel may well be complaisant if Congress wishes to expand federal service through the channels already established. Yet, I believe that if federal medical care is developed through public health channels, the public health program that we now know will be swamped and largely obliterated and destroyed—a public calamity.

The second problem is the maintenance of the standards of medical practice and its twin, the standards of medical education. Much has been said and written concerning the threat to medical standards arising from an oversupply of physicians and consequent overcompetition and resort to chicanery. I am confident that a greater threat arises from a shortage of trained physicians with the opportunities thus afforded to charlatans to invade the field with public welcome and support. Furthermore, a constant diversion of certain phases of medical care into the hands of technicians and nurses is stimulated when doctors are scarce. In the South we are seeing anesthesia pass over to nurses and both radiology and pathology under the serious threat of becoming the provinces of skillful technicians.

In spite of much talk of too many doctors, there is a positive and increasing shortage from Virginia to Missouri and south to Texas. If every college in the South graduates new doctors at its maximum capacity, there will be fewer doctors in the South ten years from now than there are today. It will be impossible for the colleges to replace the numbers that must be lost by death and retirement. Do you think we shall receive more doctors from other parts of the country? We have not. Surpluses have existed for years in the great urban centers, in New England, New York, Chicago. These men would not be satisfied with life in a rural Southern community and rural people would prefer a kindly local quack to a smart "furriner."

The federal medical services already established are in need of more doctors; both the Civilian Conservation Corps and Veterans Administration constantly seeking applicants. The Veterans Administration alone will need five hundred additional doctors in the next twelve months. If the further expansion of federal medical service should come suddenly or proceed too rapidly, the shortage of doctors in the South will become so acute as to endanger medical standards seriously. If well-trained doctors are not available for federal service, quacks will offer themselves. If there are not enough trained men to care for private practice, those without training will take the place of doctors. Once this is done, the re-establishment of good standards is a long and arduous undertaking.

The fate of medical education is bound up with that of medical practice. If doctors are scarce, there is increased pressure on medical colleges to accept more applicants, to graduate more doctors, to fill classrooms and hospital wards to overflowing. It may well happen that medical college standards will become the dam standing between a flood of eager applicants and a country badly in need of more doctors. The life of deans of medical colleges supported by the states will not become any happier.

I am keenly aware that these are not the pronouncements of a trained economist or of a physician. They are offered as the thoughts of a plain man who is worried.

The Mississippi Doctor

The journal with a vision which encourages a plan of delivering modern medicine to the masses at less cost to the individual and more profit to the practitioner. It champions the community hospital, the hub around which this service must be built.

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Published monthly at Booneville, Mississippi

Annual subscription $1.00

Entered as second-class matter, January 19, 1926, at the post-office at Booneville, Miss., under the Act of March 3, 1870.

Rush along to your state meeting, Gulfport, May 9-11, at the Markham Hotel.

Success should not always be measured by what we do, but by the efforts we put forth against the odds. This being true, no person deserves more credit than the wife of the practitioner. Like her husband, she has no time to call her own. She lives on interruptions. She must ever draw upon her supply of patience and sympathy and kindness, and tact. Ready explanation is always in order and the public expects her to be sweet and pleasant. Her husband must be pushed along promptly, although her own children are the sicker.

The faithful wife is the protector of the practitioner and the consoler of his patients. She must be everything to all people. The responsibility of the home is hers and the lonely hours come with their weight. But she lives by serving, her measure of success being the same as that of the great.

As co-partner of the practitioner in this day of medical advance, it is she who deserves the laurels of achievement. In justice to her, it would be much better for her and for his clientele that she be accorded her share of honor and praise for service faithfully and graciously rendered.

The medical world no doubt deeply sympathizes with Dr. W. J. Mayo in his serious illness. He has been the leading spirit of the greatest organization of its kind in the world, the Mayo Clinic. He was recently operated on by his son-in-law, Dr. Walters.

Now seventy-seven years old, he has been a blessing to the world along with his brother Charlie.

Dr. L. L. McDougal has done a lot of work helping to secure a history of the medical profession in Old Tishomingo County for the last one hundred years. He is now making an effort to get this history in book form. During the past century many distinguished doctors have lived in this county, now constituting Alcorn, Prentiss and Tishomingo. Dr. Marcus Taylor, son of Dr. William Taylor of Booneville, married Miss Frances Long, daughter of Crawford W. Long of Georgia, the discoverer of ether anesthesia. The Long family spent much time here.

The one-hundred-page book will sell for one dollar and twenty-five cents. Write Dr. L. L. McDougal if interested.

The Mississippi State Hospital Association will hold its annual session at Gulfport May 8, at the Markham Hotel. Dr. Lowry Rush of Meridian is the president and will preside over the meeting. Dr. Leon S. Lippincott of Vicksburg is secretary.

Be sure to visit the booths of the exhibitors at the state meeting. This is a courtesy due them and the local committee on arrangements. The exhibitors help to lighten the burden of expense on the local doctors of the guest city.

Send us a report of a case that will be helpful to the profession. We will be glad to have it.

The range of papers published in the Mississippi Doctor, covers practically every field from the practical general practitioner to the most distinguished specialist. Space is always available for the discussion of medical problems.

We are very thankful to our advertisers, one and all, and very appreciative of the doctors who have placed courtesy cards with us. We are very grateful not only to the doctors of our own state, but also in neighboring states for their kind letters and words of encouragement.

We are trying to publish a journal that will be of service to organized medicine.

In 1936-37, 5,505 indigent patients were treated in approved hospitals of the state with a death rate of seven and one-half per cent. The regular surgical, medical and hospital fees would have amounted to $812,320.00 for the year according to the secretary of the Hospital Commission, Dr. Lippincott.

The amount actually paid by the state was less than $250,000.00.

Mississippi is pioneering in its plan for the indigent sick. The eyes of the nation are upon us. The per capita distribution of funds is the great step forward. Our community hospital set-up helps to raise the general batting average of the profession and offers a good plan for a democratic distribution of funds for the indigent sick, also for hospital insurance if it should become practical for rural communities. Our set-up can be made to serve as a great bulwark against state medicine. It seems most important to go forward and complete our system as it should be, making it stronger and more efficient.

The American Medical Association will hold its annual session in St. Louis, May 15-19. Dr. Irvin Abel of Louisville, an outstanding leader in the profession, is president.

St. Louis is well located for this convention, a nice middleground between the East and the West and the North and the South. The city has a fine medical atmosphere and the profession is generous and cordial. We predict a record-breaking attendance there this year. Mississippi should be well represented. We are coming to deal more and more with the problems of medicine as well as with actual scientific treatment. We have many medical conventions, some think too many. Each one has its special strong points. The question of socialized medicine and other problems in medical economics must be met. These problems must be studied and worked out through the county and state societies and the American Medical Association. Each needs to help the other and all need to stand together for the good of the profession and especially for the benefit of the people. The A. M. A. can help the state associations and they in turn the counties. The counties should be working units through which the medical service is distributed. Co-operative medicine is not successfully practiced by any man to himself. He must join hands with his fellow doctor in order to give better service to the public and to command a higher respect from it. Every doctor is duty bound to give some time to organized medicine. So it is well to attend your county society, your state meeting, and, if possible, the American Medical Association. St. Louis, the hub of the nation, extends you a most cordial welcome.

This writer, in company with Dr. W. H. Anderson and Dr. H. M. Williams, left Aberdeen at 12:45 p. m. Monday, April 17, and drove to Montgomery, Alabama, to attend the annual meeting of the Alabama State Medical Association. It was a very pleasant drive—roads were good and the weather fine. Before leaving Amory, Mr. J. O. Prude, Jr., asked that I stop and pay his father, who lives five miles out of Tuscaloosa, a brief visit. This I did. Mr. Prude, Sr., is a most interesting character. He is eighty-three years of age. He was born in the house where he has lived since birth. His family had lived there forty or more years prior to his birth. He is preparing for publication a volume that will deal with the geneology of the prominent families of that section of the state. We reached Montgomery at dusk and after taking possession of rooms that had been engaged for us by Dr. Seale Harris, Sr., who was the out-going president of the association, we went direct to a banquet given by the State Hospital Association for its members and their invited guests. After this banquet was over, we met and mingled in a social way with many of the Alabama doctors who were arriving for the meetings to be held during the three days to follow. Many of these we already knew, but we were impressed with the cordiality and friendliness of those whom we had never met before. The membership of this association measures up to any body of medical men we have known. And it goes without saying that no group of men can surpass in any way a group composed of doctors of medicine. After attending the next morning's session, we, with a group of friends, drove over to Tuskegee and were shown over and through the Booker T. Washington Institute. We found this institution not only unique, but we feel that it is doing a good work with and for the negro race. Both Dr. Anderson and I had been given a place on the program and we regretted the circumstances compelled us both to leave the meeting before the end of the sessions. We were especially anxious to remain for the unveiling of a bronze statue of Dr. J. Marion Sims. Every doctor knows that Dr. Sims is justly acclaimed to be the father of modern gynecology. Dr. Sims once lived and worked in Montgomery and many are the stories of his life and work while living there. Another session was to give honor to Dr. L. L. Hill, Sr., who lives and works in Montgomery. Dr. Hill was the first man to repair a wounded human heart. While this has been done frequently since then, it is quite fitting to recognize the one who pioneered in this work. It is interesting to know that the patient on whom Dr. Hill operated is still living at Montgomery. The program at Montgomery was very full and interesting—mostly the papers and lectures were by home talent. This is as it should be; for it is nearly always true that home talent programs are better than those filled by visitors.

No presiding officer ever did or could preside with more grace and dignity than did Dr. Harris. He is equal to the demands of any occasion and some day he will be called upon to preside over the American Medical Association—the greatest association of medical men in existence.

It is evident that hospital insurance is giving satisfaction to the doctors who live in the industrial centers in Alabama. We have always felt that in such centers the plan would work well. But in rural and agricultural sections it can but work disastrously to the local doctors. Even in the industrial centers the ones who most need hospital care do not get it under this plan. Some plan must yet be found to care for the really indigent sick in small towns and rural districts. These people can not carry insurance and the doctors cannot longer afford to do this work without compensation. The people who are getting hospital care rarely need it and those who do need it rarely get it.

As we see the situation it is not a medical question that confronts us, but an economic situation. When most of the people have work at a reasonable wage, they will take care of the doctors and the doctors will take care of the people.

Let us all go to Gulfport!

—G. S. B.

DR. ALPHONSE McMAHON

President of St. Louis Medical Society

"Since his graduation in 1919 from the School of Medicine, St. Louis University, Dr. McMahon has remained an ardent student in spite of heavy duties and as late as 1936 he received at Master of Arts degree in psychology from St. Louis University. In addition, he has also been an able teacher and has given freely of his time, efforts and ability to his alma mater, having served in various capacities on the faculty of St. Louis University School of Medicine since 1922. His ability as an instructor in clinical medicine has found expresson in connection with the activities in postgraduate instruction of the St. Louis Clinics. Serving as president of this organization from 1934 to 1936, he was untiring in his efforts to bring our city to the fore as an important center of postgraduate teaching. Dr. McMahon has made frequent and valuable contributions to the scientific literature and he has appeared on many occasions on the programs of the local, state and national societies.

"His interest in the advancement of scientific medicine goes far beyond the local scope and he has been active in the Missouri and the National Tuberculosis Associations, the Association for the Study of Internal Secretions, the International Society for the Advancement of Gastro-Enterology and the American Heart Association. He is also a past-president of the American Therapeutic Society and for several years he has represented our state as councilor on the executive committee of the Southern Medical Association.

"In his work in the St. Louis Medical Society, our new president has been progressive in his attitude. He is well aware of the many problems which confront the organized profession and he has realized that if we hope to remedy existing evils our most essential need is a united front. With this in mind, he has opposed coercive methods and instead has advocated that while the president should lead he must not attempt to drive, that he must recognize the equal rights of all the members and that he must be impartial in the chair. His service record shows that he has unusual diplomacy and tact and that he is considerate and fair.

"As we place the gavel of the St. Louis Medical Society into the hands of Dr. McMahon as an emblem of his leadership of the organized profession throughout the coming year we may rest assured that his knowledge, training and experience will be combined with sincerity of purpose, unselfish and concerted effort, and a deep appreciation of the fact that responsibility goes hand in hand with authority and leadership. He will serve us well."

—BULLETIN OF ST. LOUIS MEDICAL SOCIETY.

PROGRAM

MISSISSIPPI STATE MEDICAL ASSOCIATION — GULFPORT

GENERAL MEETING — FIRST DAY

Tuesday, May 9, 1939

Session 1:30 p. m. to 6:00 p. m.

Roof — Markham Hotel

OPENING EXERCISES

Call to Order, President Joe E. Green, M. D., Laurel.

Invocation, Rev. Henry Brookshire, D.D., Gulfport.

SECTION ON HYGIENE AND PUBLIC HEALTH

Dr. N. C. Knight, chairman, Meridian

1. Address—Governor Hugh White.
2. The Public Health Aspects of Syphilis Control.—Dr. Paul Padgett, Johns Hopkins Hospital, Baltimore.
3. The Public Health Aspects of Pneumonia Control.—Dr. Roderick Heffron, New York City.
4. Treatment of Pneumonia.—Oscar W. Bethea, New Orleans.
5. The Value of a Home Delivery Nursing School.—Dr. T. Paul Haney, Jr., McComb.

Discussion opened by Dr. Thomas Pursur, Jr., and Dr. A. R. Perry.

SECTION ON EYE, EAR, NOSE AND THROAT

Dr. W. Lauch Hughes, chairman, Jackson

Tuesday, May 9, 1939

Session 1:30 p. m. to 6:00 p. m.

Room No. 20[illegible] — Mezzanine — Markham Hotel

1. Headache Due to Vitamin B.—Dr. J. C. Pegues, Greenwood.
2. Treatment of Convergence Squint.—Dr. Grady Clay, Atlanta.
3. Infections of the Face.—Dr. Geo. E. Adkins, Jackson.

Discussion opened by Dr. C. A. McWilliams and Dr. E. LeRoy Wilkins.

4. Dysphonia and Aphonia.—Dr. D. E. Staton, Columbus.
5. The Tracheotomy—Its Dangers and Complications.—Dr. Carl Granberry, New Orleans.
6. The Use of Foreign Protein in Ophthalmology.—Dr. E. W. Green, Hattiesburg.

Discussion opened by Dr. B. S. Guyton and Dr. V. D. Hagaman.

EVENING SESSION—EIGHT O'CLOCK

Tuesday, May 9, 1939 — Roof of Markham Hotel

— The Public Is Invited —

1. Invocation.—Rev. J. Brown, D.D., Gulfport.
2. Addresses of Welcome:
   In behalf of city of Gulfport—Mayor J. W. Milner.
   In behalf of Coast Counties Medical Society—Dr. F. O. Schmidt, Ocean Springs.
3. Response to Addresses of Welcome.—Dr. C. E. Burnham, Bay Springs.
4. In Memoriam—Secretary T. M. Dye, M. D.
5. President's Address: Socialized Medicine from the Viewpoint of a Country Doctor. —Dr. Joe E. Green, Laurel.

6. Ewing Fox Howard Oration: "Modern Trend of Obstetrics."—Dr. Oren Moore, Charlotte, N. C.

Section on Surgery

Dr. Lawrence W. Long, chairman, Jackson
Wednesday, May 10, 1939
Session 9:00 a. m. to 12:30 p. m.
Convention Hall — Markham Hotel

1. Chairman's Address: Sympathetic Surgery for the General Surgeon.
2. The Surgical Significance of Amebiasis.—Dr. Alton Ochsner, New Orleans.
3. What Mississippi Is Doing About the Cure of Tuberculosis with Surgery.—Dr. Henry Boswell, Sanatorium.
4. The Cautery: A Surgical Necessity.—Sydney W. Johnston, Vicksburg.

Discussion opened by Dr. J. P. Culpepper, Jr., and Dr. H. R. Shands.

5. The Late Complication of Head Injuries and Their Treatment.—Dr. Cobb Pilcher, Nashville.
6. Present Day Obstetrics.—Dr. C. L. Simmons, Hazlehurst.

Discussion opened by Dr. E. L. Walker and Dr. O. G. Eubanks.

7. Modern Concepts in the Treatment of Facial Injuries.—Dr. Wm. Milton Adams, Memphis.
8. Carcinoma of Cervix Uteri.—Dr. Nathan Kendall, Jackson.

Discussion opened by Dr. W. H. Parsons and Dr. V. B. Philpot.

Section on Medicine

Dr. W. H. Anderson, chairman, Booneville
Wednesday, May 10, 1939
Session 2:00 p. m. to 6:00 p. m.
Convention Hall — Markham Hotel

1. Night Blindness and Vitamin Deficiency as Evidenced by the New Biophotometer. —Dr. George W. Owen and Dr. Robin Harris, Jackson.

Discussion opened by Dr. J. C. Adams and Dr. Alston Callahan.

2. Syphilis in Its Relation to Insanity in the Mississippi State Hospital During the Last Ten Years.—Dr. Willard L. Waldron, Whitfield.

Discussion opened by Dr. F. A. Davidson and Dr. B. J. Marshall.

3. Some Everyday Pediatric Problems—Dr. Harvey F. Garrison, Sr., Jackson.

Discussion opened by Dr. Lamar Arrington and Dr. Van C. Temple.

4. The Diagnosis and Treatment of Coronary Artery Disease.—Dr. A. Carlton Ernstene, Cleveland, Ohio.
5. The Problem of Tuberculosis.—Dr. W. A. Toomer, Tupelo.

Discussion opened by Dr. D. L. Anderson and Dr. J. A. Rayburn.

(Continued on Thursday).

Section on Medicine

(Continued from Wednesday)
Thursday, May 11, 1939
Session 9:00 a. m. until completed
Convention Hall — Markham Hotel

6. Some Gastro-Intestinal Manifestations of Deficiency Diseases.—Dr. Laurence J. Clark, Vicksburg.

Discussion opened by Dr. J. H. Green and Dr. J. W. D. Dicks.

7. The Relation between Urology and Other Branches of Medicine.—Dr. Earl Floyd, Atlanta.
8. Several Procedures in the Management of Cervical Diseases and Injuries.—Dr. M. M. Snelling, Gulfport.

Discussion opened by Dr. W. F. Hand and Dr. Joe P. Evans.

House of Delegates

FROM THE OLE MISS MEDICAL SCHOOL

Dean B. S. Guyton reports the completion of the transferring of the second-year medical students. Those transfers which were not reported in the March issue of the Mississippi Doctor include:

Robert Tankersley Bonney, Enterprize, Tulane Medical School; Harold Woods Christy, Oxford, Northwestern University Medical School; Floyd Miller Davis, Van Vleet, University of Tennessee Medical School; Catherine Fontaine, Clarksdale, University of Tennessee Medical School; Joe A. Simpson, Jr., Wiggins, Baylor University Medical School.

By action of the faculty of the Medical School, the summer work required of students following their second year has been reduced from three months to one month, which time is to be spent at the state tuberculosis sanitorium.

Dr. J. B. Looper and Dr. A. R. Buchanan attended the meeting of the American Association of Anatomists held at Harvard Medical School in Boston on April 6, 7, and 8.

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Rowland Medical Library

The new postage rate on books makes it

possible to borrow and return the average book at a total of 6c.

Books may be borrowed for two weeks and renewed for two weeks. Requests should be accompanied by stamps to cover postage (3c for the book). Recent reprint material on any subject will be sent on request.

— New Books —

Cronin: *The Citadel.* 1938.

Ling: *Recent Advances in Industrial Hygiene and Medicine.* 1937.

Page: *Chemistry of the Brain.* 1937.

Fulton: *Physiology of the Nervous System.* 1938.

Kerr: *Forensic Medicine; a Textbook for Students and a Guide for the Practitioner.* 1936.

Kovacs: *Electrotherapy and Light Therapy.* 1938

Rice: *Injection Treatment of Hernia.* 1937

Ross: *The Common Neuroses, heir Treatment by Psychotherapy; an Introduction to Psychological Treatment for Students and Practitioners.* 1937.

Smith: *The Physiology of the Kidney.* 1937.

Stevens: *Hearing, Its Phychology and Physiology.* 1938.

Walton: *Marihuana, America's New Drug Problem.* 1938. a

Welch: *Papers and Addresses,* by William Henry Welch. 1920.

Atkinson: *Ocular Fundus in Diagnosis and Treatment.* 1937.

Barnhill: *Surgical Anatomy of the Head and Neck.* 1937.

Duke-Elder: *Textbook of Ophthalmology* 1933.

Haiek: *Pathology and Treatment of the Inflammatory Diseases of Nasal Accessory Sinuses.* 1926.

Jackson: *The Larynx and Its Diseases.* 1937.

Thomson: *Diseases of the Nose and Throat.* 1937.

Thorington: *Refraction of the Human Eye.* 1939.

FOR CHILD HEALTH DAY

Child Health Day has for its motto this year, "The health of the child is the power of the nation."

We should be interested in child health not only one day in the year, but every day. The physician and the nurse have the very greatest opportunity to render a great service in this field. The following, "A Mother's Prayer," from the Children's Bureau, summarizes a great vision and offers practical application of its realization.

A MOTHER'S PRAYER

O, Lord, Thou has put into my keeping the life of this, my Child—

He is weak—help me to make him strong!
He has no knowledge—help me to teach him wisdom!

I would keep him always in the sun, that his limbs may be straight and his feet sure in the rough paths of the world;

I would nourish his body with the food gifts of the milch cow and with the green things of the Earth, that he may be rosy and firm-fleshed, and filled with the joy of keen health;

I would fail not to guard him from the terrors of disease, from crowded places, and from the Judas kisses of unthinking friends;

I would teach him the delight of clean skin, clean speech, and clean thoughts—his mind shall know sunlight as does his body;

I would walk with him in the pleasant valleys of Bookland, and lead him up to the infinite hills where abideth Thy Word;

I would give great pictures for his eyes, great music for his ears, great gentleness for his heart; he shall know nobleness wherever he finds it, and that it dwelleth as often among the shadows as in the high places;

I would teach his hands the blessedness of work, when that work is honorable and well done; and that its rewards is in the doing and not in the praise of other men;

I would teach him to be faithful in the tasks of every day, lest Death should catch him sleeping at his post;

I would take him to the middle of the seas, where is the Father of all Waters, and under the stars, I would show him how small and how puny is the thing called Man, but how splendid beyond Time and Change is the unconquerable adventurous spirit of Man!

O, Lord, I would do all these things and many more for this little Son that Thou hast given into my keeping—

But who am I, that have failed so miserably with my own ways, to have this grace of Motherhood!

Lord, open mine eyes with Thy Finger of Light, lest in the dark night of my blindness I lead his trusting feet astray!

—Alice Rogers Hager.

OLE MISS GRADUATES ARE FEATURED ON PROGRAM AT OXFORD

Thirteen graduates of the University of Mississippi School of Medicine were featured on the program of the annual quarterly meeting of the North Mississippi Medical Society on the campus.

All those on the program, held in the auditorium of the Alexander Lee Bondurant Graduate Building, are practicing physicians in Jackson.

They are: Dr. Temple Ainsworth, Dr. Van Dyke Hagaman, Dr. Toxie Hall, Dr. Lauch Hughes, Dr. Lee Lipscomb, Dr. L. B. McCarty, Dr. Bill Noblin, Dr. Carter O'Ferrall, Dr. George Riley, Dr. W. L. Waldron, Dr. Brister Ware, Dr. Charles E. Ward and Dr. T. E. Wilson.

Dr. C. M. Speck of New Albany is president of the society, and Dr. A. H. Little of Oxford, is secretary.

DR. McCARTHY HEADS SOUTHEASTERN HOSPITAL CONFERENCE

Dr. A. M. McCarthy, graduate of the University of Tennessee College of Medicine, and past president of the Mississippi State Hospital Association, was chosen president of Southeastern Hospital Conference at its recent meeting in Jacksonville, Fla. He is chief of staff of the George C. Hixon Memorial Hospital at Electric Mills, Miss.

VITAL STATISTICS INVESTIGATIONS

An enormous number of deaths has been reported in Mississippi and in other states where no doctor signed the certificate. Many investigations are being made to see just what the cause is, whether the doctor refused to go or whether there was no effort made to secure a doctor. Dr. J. Rice Williams, county health officer for Chickasaw, has made investigations in his county and Dr. R. B. Caldwell, councilor, has made investigations in Lee and Prentiss. They report that they have not found a case in which the doctor would not go, but that every one who had tried to secure a doctor did so. They give satisfactory explanations in many of the cases where no doctor signed the death certificate. Further investigation should be made so that all records may be correct. The investigation made by Drs. Williams and Caldwell speak well for the doctors.

LATEST ADDITIONS TO THE MISSISSIPPI STATE BOARD OF HEALTH LIBRARY

E. LOUISE WILLIAMS, Librarian.

(Note: Physicians may borrow books and journals from the Library upon request. Most of the loans are for a two-week period with the privilege of renewal upon request).

Meningiomas, Their Classification, Regional Behavior, Life History, and Surgical Results, by Harvey Cushing, 1938.

Syphilis, by Forest Ray Moulton, 1938.

Laboratory Diagnosis of Syphilis, by Harvey Eagle, 1937.

Health, Hygiene and Hooey, by W. W. Bauer, 1938.

Yearbook of Dentistry, 1938.

How to Use Pictorial Statistics, by Rudolph Modley, 1938.

The Great Physician: Sir William Osler, by E. G. Reid, 1934.

Surgery of the Chest, by George F. Straub, 1932.

Big Fleas Have Little Fleas (Who's Who Among the Protozoa), by Robert Hegner, 1938.

Clinical Aspects of Visceral Neurology, by W. K. Livingston, 1935.

History of Dermatology, by William Allen Pusey, 1933.

History of Syphilis, by William Pusey, 1935.

Endocrine Medicine, 4 vols., by William Engelbach, 1932.

Public Welfare Administration, by Marietta Stevenson, 1938. st

Parental Therapy, by W. Forest Dutton, 1936.

Lillian Wald: Neighbor and Crusader, by Robert L. Duffus, 1938.

Pioneers of Public Health, by M. E. M. Walker, 1930.

Mechanics of Normal and Pathological Locomotion in Man, by Arthur Steindler 1935.

The Life of Chevalier Jackson, an autobiography, 1938.

Bacteriophage and Its Clinical Application, by F. d'Herelle, 1930.

The Foundations of Nutrition, by Mary Rose Swartz Rose, 1938.

The Psychology of Early Growth, by Arnold Gesell and Helen Thompson, 1938.

Health Insurance With Medical Care, by

Douglass W. Orr, and Jean Walker Orr, 1938.

Step by Step in Sex Education, by Edith H. Swift, 1938.

Practical Bacteriology, Haematology and Animal Parasitology, by E. R. Stitt, 1938.

Chapters in American Obstetrics, by Herbert Thomas, 1935.

Classical Contributions to Obstetrics and Gynecology, by Herbert Thomas, 1935.

Handbook on Social Hygiene, by W. B. Long and J. A. Goldberg, 1938.

An Introduction to Materia Medica: Drugs and Solutions, by Stella Goostray, 1939.

A Textbook of Applied Microbiology and Pathology, by Thurman B. Rice, 1939.

Study Guide Textbook in Anatomy and Physiology, by Carolyn E. Gray, 1939.

Education Through Physical Education, by Agnes R. Wayman, 1934.

Elementary Chemistry, by Imo P. Baughman, 1937.

Alcohol: One Man's Meat, by Edward A. Strecker and Francis T. Chambers, Jr., 1938.

The Newer Knowledge of Nutrition, by E. V. McCollum, by Elsa Orent-Keiles and Harry G. Day, 1939.

BOOK REVIEWS

CLINICAL GASTROENTEROLOGY, by Horace Wendell Soper, M. D., St. Louis, published by C. V. Mosby Company. Price, $6.00, 314 pages, 212 illustrations.

Although the entire field of gastroenterology is covered, special emphasis is given to diagnosis and treatment. Physiological standards that will aid in diagnosis and simplify therapy indications for surgery, but not surgical technique, are clarified.

Beginning with conditions of the oral cavity, the esophagus, the stomach and the intestinal tract are considered. Size, form, and physiological variations of the stomach are presented with the help of x-ray plates. Diets are considered along with diseases discussed. Constipation and obesity receive the frank attention of the author, along with the multiple afflictions of the colon. This book is purely clinical, advising methods that have produced the best results in practice. The excellent x-ray plates used add inestimably to the clarity of the details, thereby increasing the utility of the book for the general practitioner.

MOTHER AND BABY CARE IN PICTURES, by Louise Zazriskie, R. N., formerly night supervisor at the Lying-In Hospital in New York, and field director of the Maternity Center Association, New York, is the first book available to parents completely illustrated on mother and baby care. Striking evidence of the timeliness of this book is the emphasis given the importance of healthy parents. The relationship of parents' health, mental and physical, to the child is explained, showing how a well and happy baby must have well and happy parents. Scientific advice and instructions are given for the prenatal period, confinement and care of the infant. The one hundred and eighty-seven photographic studies clarify admirably the problems faced by the expectant mother, care of herself, feeding, handling and dressing the baby. Equipment for all the stages involved from prenatal care to child training one, two and three years later is clearly illustrated and discussed.

This is an excellent book to supplant the commercialized information advanced by lay magazines which, unfortunately, do not always give accurate health instructions.

MOTHER AND BABY CARE IN PICTURES is published by J. B. Lippincott Company, Philadelphia. Price $1.50.

DRUG ADDICTS ARE HUMAN BEINGS, by Henry Smith Williams, M.D., Published by Shaw Publishing Company, 1405 Eye St., N. W., Washington, D. C. Price, $2.50.

As startlingly moving as "Twenty Years with a Chain-Gang" or "Devils' Island," this story of "our million-dollar drug racket," tells how it was created because the Federal Narcotic Bureau does not recognize the authority of the Supreme Court decision of 1925, cited and reaffirmed in 1936, declaring all "codes" unconstitutional, but holds the Narcotic Code above the law; also how the racket can be wiped out if the Harrison Drug Act of 1914, which placed the whole business in the hands of doctors, is upheld. A bureaucratic disregard of Federal law and defiance of Supreme Court rulings by lower courts, gave rise to an underworld racket of drug smugglers and dope peddlers, plus the illegal persecution of doctors who prescribed narcotics.

The Supreme Court angle alone makes the book of first importance, but the plight of our half-million drug addicts, real human beings—not criminals—victimized by the extortions of the dope peddler, demands the attention of every doctor. It is a fearless exposure of cruelties to patients and injustices to doctors that are based on careful and authoritative investigations by the author.

MISSISSIPPI STATE MEDICAL ASSOCIATION
and
COMPONENT SOCIETIES

The Present Day Status of Hypertension*

T. E. WILSON, M.D.
JACKSON, MISS.

Authorities on cardiovascular physiology and pathology now regard values of one hundred and forty millimeters of mercury as the upper limit of the normal systolic pressure in the brachial artery and ninety-five millimeters of mercury as the limit of the normal diastolic pressure. It is higher in the femoral and popliteal arteries. There is a gradual fall in the smaller arteries until a pressure of about eight millimeters is recorded normally in the arterioles. The old rule of one hundred plus the age of the patient for some time believed to represent the normal blood pressure for that individual has been discarded. The blood pressure varies throughout the day and night and these variatinos are accomplished, it is believed, by the activity of the arterioles; that is, the constriction and relaxation of this peripheral vessel, it would appear, is the chief mechanism used by the body to maintain an ideal pressure. Extreme examples of these reactions are exemplified by the marked elevation of the blood pressure observed in fright and the marked fall in blood pressure seen in shock. The elasticity of the aorta is now recognized as one of the most important factors in controlling the pressure. The cardiac output, rate, the tonus of the heart muscle and the blood viscosity and volume are other factors involved. From a review of the literature it appears that the tonus of the skeletal muscles has perhaps not been given sufficient study regarding the relationship between the blood pressure and the factor of peripheral resistance. The gradual increase in the blood pressure accompanying the growth, development, maturity and aging process seems to be the result of a very gradual loss of elasticity of the vessel wall. The final drop in the systolic pressure, which is seen so frequently as a patient is approaching death, is thought to be due to the loss of myocardial tonus and dilatation of the heart.

Since the discovery and general appreciation of the importance of blood pressure elevations above normal there has been a gradual change in the classification of the types of hypertension until now it is believed that an abnormal degree of arterial vasospasm is regarded as the chief cause of high blood pressure and that most cases fall into the group known as essential hypertension. However, there are other conditions which are known to cause high blood pressure, namely, coarctation of the aorta, tumors of the pituitary and adrenal glands, hyperthyroidism, lead poisoning, and an increase in intrarenal arterial pressure. It seems, however, that from the standpoint of clinicians, most of the cases of hypertension commence with overactive constriction of the arterioles and that the factor of long-standing increase in the peripheral resistance is the main consideration. It is known that aortic regurgitation results in mild hypertension. Mitral stenosis, also, does this but the mechanism here is different. The heart is making an effort to compensate for the defect in the structure of the valves. The sclerosing process involved in the walls of the arterioles seem to be of much greater importance than arteriosclerosis involving the large and the medium size arteries. Many authorities regard the two conditions as having no relationship. It is true, however, that arteriosclerosis of at least some degree always sooner or later follows the vasospastic stage of essential hypertension. Some investigators doubt that arteriosclerosis itself is a very important cause of hypertension. The hereditary factor now seems to be a proven etiologic factor, and the cold-pressor test almost specific as a means of prophesying whether or not an individual will develop essential hypertension.

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*Read before the Section on Medicine at the Seventieth Annual Session of the Mississippi State Medical Association, Jackson, April 20, 1938.

In the experimental laboratories the work of Goldblatt at Western Reserve University is at present the most outstanding. He has demonstrated the following changes in dogs and monkeys:

1. Bilateral nephrectomy is followed by uremia but not hypertension.

2. Complete gradual occlusion of **both** renal arteries produces hypertension.

3. But not if both arteries and veins are occluded at the same time.

4. Hypertension is relieved by the removal of the affected kidney when one kidney is clamped off.

5. The same thing happens when both kidneys are clamped off to produce the hypertension, that is the blood pressure returns to normal when the clamps are removed.

6. An extract of ischemic kidney contains more pressor substance than that of a normal kidney.

7. Complete removal of both adrenals abolishes or prevents the hypertension produced by constricting the renal arteries.

8. Sodium chloride and sodium bicarbonate do not affect this result.

9. Portions of adrenal cortex sufficient to maintain life permit the appearance of hypertension in this experiment.

10. The medulla of the adrenal plays no part.

11. He draws the conclusion that x-ray and surgery of the adrenals is unwarranted in the treatment of hypertension.

J. E. Wood, Jr., of the University of Virginia, has made the following observations working with dogs:

Four normal dogs and three dogs with experimental hypertension were fed large doses of beef fat which resulted in a marked elevation of the systolic blood pressure in both groups. The pressure fell in each of these dogs when the weight was reduced on a standard diet. Other dogs with experimental hypertension failed to gain weight and there was not a rise in their blood pressure. At no time was there a change in the diastolic pressure of the dogs which developed hypertension.

At the present time it is believed by some of the leading clinicians that the end results in long-standing high blood pressure can be delayed a long, long time if certain adjustments are brought about in the life of the patient. About 50 to 75 per cent die from heart failure, 25 per cent from kidney failure and 10 per cent from apoplexy. For this reason every effort should be made to obtain a complete understanding of the patient's physical condition, habits, and general conduct as early as possible. A complete physical examination should be followed by a careful study of the eye grounds, heart and the functional status of the kidneys. Such an examination done at the onset of the disease and followed by examinations indicated from time to time will not only add to a better understanding of the disease but will enable the physician properly to manage the case. The onset of the disease is usually gradual, and the elevated pressure is most frequently discovered accidentally. The disease tends to run a cyclic course and is progressive and usually drawn out over a period of ten to twenty-five years. Sometimes the disease runs a very rapid course of a few months to a very few years and its symptomatology is characterized by its stormy course. The term malignant hypertension has been applied to such a form of hypertension. Some of the authorities believe this is only a form of essential hypertension while others regard it as a distinct clinical entity. The disease appears to be milder in women than in men in middle life and in the aged than in young adults, and is seldom seen in childhood. One should not attempt the treatment of hypertension as the management of the patient with hypertension is the method of preference in dealing with this condition. The reduction of weight is nearly always accompanied by a fall in pressure and improvement in the patient's general health. For years authorities on the subject have advised relaxation and the spending of week-ends in bed. Very few physicians seem able to accomplish such a change in the patient's hours. These two factors, however, together with mild sedative drugs at the present time seem to be our most valuable weapons and should be employed early in the disease. This is a difficult task. The patient and his family demand every attention and are willing to submit to most anything for relief. But this attitude does not appear usually until the patient is suffering with severe kidney or heart symptoms. If our conception is correct we should commence a rigid regimen of management as soon as the discovery is made and not wait until the disease has run its course. One of the most important observations in recent years has been made in a study of drugs used in the treatment of hypertension. Over three hundred remedies have been used for treatment of this condition. Each of these remedies gave some degree of relief and the conclusion was drawn that psychotherapy was of greatest importance in the management of individuals with the disease. At least one clinician is using a class method of treating hypertension. The vasodilators are in good standing as a means of treating emergencies arising from the disease and the trend seems to be away from the giving of powerful vasodilators over a very long period of time. Sedatives given regularly over a long period of time are now in vogue. The dietary treatment of hypertension now rests on a basis of the consideration of weight, reductoin in the obese with adequate rather than restricted proteins and, high vitamin ration.

X-ray treatment of hypertension is being attempted by men in this country and in Europe. Probably the most outstanding worker in this field is Dr. Hutton of Chicago who for some time has felt that in cases of essential hypertension in which involvement of the kidneys can be ruled out there is a good response to irradiation of the pituitary and adrenal regions. It appears that this procedure can be done with safety. Certainly some patients have been benefited by it and it seems that more cases should be submitted to this method of treatment. In Europe irradiation of the carotid sinus with relief has been reported. In some of the medical centers a good many patients are being subjected to surgical procedures for relief while other medical schools have not yet seen fit to advise this procedure. In fact, it appears that some medical men are frankly opposed to operative treatment. It may be that selected cases can be greatly benefited by this procedure. Practically all operators report relief of the symptoms present before the operation. These cases are studied very carefully. First, with the idea of ascertaining just how much damage has been done to the blood vessels, the patient is given various vasodilators and sedatives under careful regulations. Considering that the blood pressure can be brought to normal or to about a normal level in an individual under fifty without sclerotic changes the patient is given the benefit of one of the following procedures: rhizotomy, celiac-ganglionectomy, splanchnic resection, adrenalectomy or various combinations of those operations. The results are encouraging. Although fifty to sixty per cent return to previous elevations in a few weeks, most cases are given a great deal of symptomatic relief.

DISCUSSION

Dr. W. K. Purks (Vicksburg): Dr. Wilson has called to our attention and presented in excellent fashion certain facts with respect to the problems of hypertension. His subject "The Present Day Status of Hypertension" encompasses a field of limitless proportions. He has wisely avoided the more controversial questions about the subject. In the present state of our ignorance discussion of such questions is worse than useless. Whether hypertension is a disease or a symptom is a much debated question. I agree with a recent statement of Reisman to the effect that this question can be answered in the following way. When we know the cause or the apparent cause of hypertension we emphasize it and consider the hypertension is a part of the symptom complex. When we do not know the cause we look upon the hypertension as a disease itself. From the strictly clinical point of view this attitude is sound, for it implies that we make diligent effort to find the cause whether it be pituitary tumor, aortic insufficiency, coarctation or what not, and that failing in this search we treat the patient, as indeed we must, according to his symptoms. I feel that Dr. Wilson's paper emphasizes strongly just what our attitude toward the hypertensive patient ought to be. We must run down all possible causes for his disease, we must keep posted in regard to the interesting experimental work that is being done in regard to etiology of hypertension and its treatment and stand ready to accept whatever may be of clinical value. Unfortunately, little real advance has been made when we view the results critically. At present then the correct attitude to assume toward the hypertensive patient is to resolve to treat the patient and not his blood pressure. The essayist cites the necessity for a thorough understanding of the patient's physical, psychic, emotional and economic status. Our treatment, or rather management of the patient, then, is chiefly based upon proper regulation in regard to (1) rest, both physical and mental, (2) diet, (3) the judicious use of a few drugs chiefly sedatives.

I should like to emphasize also that the physician who treats the hypertensive patient must from the beginning accept the responsibility of preventing or delaying the advent of the complications which are the chief cause of death. Here again the correct course is usually clear once the physician assumes the proper attitude toward the problem. Hypertensive patients who die from causes related to their hypertension do so chiefly because of one of three complications—namely (1) cerebral hemorrhage, (2) cardiac failure (3) renal failure. Relatively frequent examinations are necessary to detect the early signs or symptoms of such impending complications. With respect to the first complication there seems little doubt that periods of restricted activity properly spaced or properly timed may occasionally tide the patient over a period of unusual pressure elevation and prevent cerebral hemorrhage. Also it seems likely that well-timed phlebotomy and dehydration procedures may prevent disaster.

In respect to prevention of the onset of congestion heart failure there is much that can be done. The general measures applicable to hypertension should be even more carefully observed if congestive heart failure seems imminent. Also the work of Christian and others amply shows that digitalis helps to inhibit cardiac hypertrophy and to retard some of the aging process of the myocardium. The judicious use of digitalis in the face of impending congestive heart failure is one of distinct value. However, there are definitely some hypertensive patients that do not tolerate the drug well and are made worse by its use. Clinical judgment is the only criterion for deciding for or against the drug. In respect to preventing renal failure there is not much in a specific sense that can be done. General measures are helpful. I should like here to stress the necessity of giving the patient a reasonable diet. The quantity of food that he takes is vastly more important than the quality. Certainly the sharp restriction of protein intake to levels of 25 to 40 grams per day accomplishes no good and may, in fact, be harmful. It will hasten the advent of weaknesses, anemia and general debility.

Finally, then, I should say that today what we accomplish for our hypertensive patient will depend more upon the attitude with which we approach him than upon what precise measures we employ. We must assume responsibility for treating the whole patient and of preventing as long as possible those complications that are most common.

Dr. John C. Henthorne (Jackson): According to one clinical concept, essential hypertension is the result of a heredity hyperirritability of the vasomotor system. If this be true, the lesion must be in the vascular system. The type of blood vessel affected has proved to be the arteriole.

It is well known that the arterioles of the kidney and the retina are affected in hypertension, and that profound characteristic secondary changes occur, which interfere with function, in both locations. In the kidney, for instance, there is gradual atrophy of many of the functional units as a result of arteriolar narrowing. Uremia in hypertension may therefore be attributed to loss of renal substance. The hypertension kidney in the end state of the disease is characteristically small and granular. It is granular because some over-worked functioning units still remain and project onto the surface of the otherwise shrunken kidney.

According to the clinical concept, all arterioles of the systematic circulation should be affected unless the hereditary hyper-irritability applies to only very special vasomotor nerve centers. Changes have been described, for instance, in the arterioles of skeletal muscles, but in no place except the kidney and retina are significant secondary changes known to occur. This difficulty is partly due to variaations, which normally occur, in the size of the lumen as compared with the thickness of the wall in the terminal arterioles of different organs. The importance of the function of the kidney and retina and their relatively constant diurnal activity may have something to do with the amount of change in these regions. For instance, persons with severe hypertension may be resting their skeletal muscles most of the time, and we should only find secondary changes in the muscles of an athlete who continued activity in spite of severe hypertension.

Pathologic changes do occur in essential hypertension which are not arteriolar in nature, but such changes are not constant and they are developed later than arteriolar changes, elevation of blood pressure, enlargement of the heart. It is true for instance that hypertensive individuals are subject to coronary disease, but here the difficulty does not lie in the arterioles but is possibly due to the fact that the heart must enlarge in order to maintain high blood pressure, and as it enlarges any previous impairment of coronary blood flow is naturally accentuated.

It is also true that hypertension patients have cerebrovascular difficulties, but here again the lesion is rarely arteriolar but is arterial. An artery either blows out or else wide fluctuations of blood pressure superimpose thrombosis upon a previously existing arterio-sclerosis.

High-blood pressure is a symptom of this presumably arteriolar disease and probably must be maintained to keep up sufficient blood flow through the kidney in spite of narrowed arterioles. This theory is given weight by the knowledge that many of the secondary types of hypertension are the result of obstructions of renal blood flow such as occur in the glomerular capillaries in chronic glomerulonephritis, in amyloid disease, etc. In coarctation of the aorta the kidneys may be the most demanding of the organs that are fairly screaming for an increased blood flow.

It seems reasonable to suppose, then, that much of the confusion which has existed in the field of the pathology of essential hypertension is the result of failure to respect the arteriole as the site of the initial lesion of autonomic nerve over-activity. Whether the arteriolar change is the result of muscular hypertrophy or degenerative change and whether the changes are localized or generalized must be settled by future research.

Dr. Robin Harris (Jackson): The blood vessels in the retina are so placed in the human body that they may be studied at any time during life. There is no other place where the blood vessels may be studied in situ. It is possible that a diagnosis of hypertension may be made without having the blood pressure taken and without having a general physical examination made. This is done by studying the arteries and veins of the retina. Since my association with Dr. Wilson I have learned a great deal about the eye grounds in hypetension. Occasionally I pick up a case of hypertension by examination of the eyes with the ophthalmoscope. This has been proved on several occasions by later examinations by Dr. Wilson. Most of these cases of hypertension are deficient in vitamin A as evidenced by tests with the new biophotometer. Whether vitamin deficiency has any bearing on hypertension is problematical. Also a test for vitamin A deficiency amounts to a test for vitamin deficiency in general.

In toxemia of pregnancy with hypertension it is possible to watch from the beginning the spasm of the retinal arteries which are wave-like in character. This study of blood vessel spasm may be watched until the blood pressure is extremely high. The ophthalmologist may tell you when to empty the uterus. If retinitis occurs before the 28th week of pregnancy there is only one chance in four of getting a live baby. If pregnancy is terminated there is 100 per cent chance of the mother becoming permanently damaged in her blood vascular system.

Dr. T. E. Wilson (closing): I appreciate the discussion. I have been impressed by the attitude of the laity as regards high blood pressure. It seems to me that they all believe it lies at the root of the tooth or a diseased tonsil. The modern conception as we understand it is that this is of no fundamental importance. Focal infections have been discarded as the cause of high blood pressure. They undoubtedly injure the better health of the individual and should be eradicated, but with great care. Cardiovascular disease seems to predispose to thrombosis and emboli. I have seen two individuals during the past week under surgical procedure who had embolic phenomena.

Then during the past several years I have made it a rule to study causes of hypertension, to have the patient rest in a small room I have at the office, and I take the blood pressure and maybe find it 220. I pull the shades down, give 30 or 40 minutes relaxation and then go back and find a drop of 40 or 50 mm. in the systolic blood pressure, and I use this as a means of telling these people that this was done purposely to convince them of the value of rest. It is a sad thing to face the situation of having attempted to cure when your end results have been reached and I think the laity is to blame for it. There are some definite hereditary factors involved and undoubtedly the apparent muscle strain is mostly made in the protection of their blood pressures.

The Management of the Obstetric Case Outside the Hospital*

C. E. BOYD, M.D.
AMORY, MISS.

The idea has been growing for several years, that both mother and child would have better chances if delivered in hospitals. This question is open to serious doubt, for the basic reason that facts are lacking to substantiate such assertions, and since a vast majority of maternity cases must be cared for through the prenatal period, and finally delivered outside the hospital, by the general man, the object of this paper is to stress the importance of the care these cases should receive, and the early recognition of the cases that can not be safely delivered in homes, or whose chances would be better in the hospital. After more than a quarter of a century in a fairly extensive general practice, with at least an average number of obstetric cases occurring in such pratcice, I have been definitely convinced that the man who approaches maternity cases with the opinion that he is able to cope with all situations without difficulty, is bound to meet surprises, disappointments, calamity and tragedy. The text book case sounds alluring, makes interesting literature, and would be a pleasure to handle, but rarely exists when we reach the bedside of the expectant mother. No branch of medicine should receive more care, or have more thorough preparation on the part of those who practice it, than obstetrics. Every case should be approached with as thorough knowledge of the underlying principles of normal and abnormal gestation as is possible to obtain, and, in addition, we should have profound respect for what nature can accomplish in her own way. Then stand by with a feeling of reverence for the mystery of reproduction and humility in the way of the assistance that we may be able to give. In dealing with obstetric cases time is the most important factor to be considered, the case that looks almost hopeless on precursory examination, often times becomes a trivial matter after the lapse of several hours. Any man who is not willing to give all the time necessary, to each and every case, for nature to assert itself before beginning procedures that may be injurious, instead of helpful, should refrain from doing obstetrics.

To the man in general practice who has the knowledge and skill to do good obstetrics, and the patience to refrain from meddlesome interference, with the ability to control his temper under any circumstances, will do not only much obstetrics but all else in the way of practice will be added as well. To do good obstetrics creates a place in practice for any man that nothing else can give.

Pre-natal care. — Every expectant mother should have the benefit of the best prenatal care possible. This should include as thorough physical examination as we are capable of making, teeth, heart, lungs and kidneys, a blood Wassermann, and a thorough pelvic examination last. The urine should be frequently examined to determine if any gross abnormality is developing, and remembering at the same time that eclampsia sometimes develops where the most careful examinations have shown nothing abnormal. The heart should be closely watched, if at all impaired, and at the slightest sign of decompensation, rest and appropriate measures should be instituted. The blood pressure should be frequently taken and its range carefully noted. A reasonably low blood pressure or one that is relatively high and remaining constant need create no great amount of alarm, and usually requires no treatment, but a sudden rise in blood pressure should be regarded as one of the gravest danger signals. Cases with a previous history of tuberculosis should be closely watched, and with proper care, most of them come through in fair condition, provided the pregnancy is not too frequently repeated. At the pelvic examination we should be able to determine whether a normal sized baby, or one that is fairly large, can be brought through the pelvis without too much danger to mother or child. This should be fairly easy to anyone who has done much obstetrics, even without the aid of pelvimetry. With a patient on her back on a hard mattress, it is easy to determine if we have room in an antero-posterior direction, then, granting that we have, next pass the index and ring fingers of the right hand between the bones forming the pubic arch. If the fingers thus placed can be separated enough to pass the index finger of the left hand between them at the base we have room enough to deliver a fair sized baby even though the labor might be tedious.

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*Read before the Section on Medicine at the Seventy-first Annual Session of the Mississippi State Medical Association, Jackson, April 20, 1938.

The diet should be well balanced and wholesome, with an allowance that will not cause too much gain in weight. Plenty of fruit and vegetables carrying the proper mineral content, and not forgetting the vitamin foods, should be advised. Plenty of water with proper elimination should be insisted upon, and the required amount of rest and relaxation taken. Exercise in moderation and stopping short of exertion should be carefully stressed. Lifting heavy objects, strenuous exertion and taking long automobile rides should be interdicted. If, with the knowledge on our part obtained by examination and study of the case, we are satisfied the patient has a fair chance, she should be given the above instructions as to diet, rest and exercise and allowed to go on to delivery.

Labor.—When the patient has reached the end of the period of gestation, and the onset of pain announces that labor has begun, each stage should be regarded as a separate entity, requiring a definite time for gradual mergence into the succeeding stage. The first stage lasting from the beginning of pain to complete obliteration of the cervix, is generally the most trying time for both patient and physician, and whether the patient is a primipara or a many times repeated multipara makes little difference, for the factor of prime importance is whether the cervix is going to dilate easily or be a long drawn out and tedious process; and in either patient, primipara or multipara, obliteration of the cervix should be complete before attempts at delivery are begun. This stage in the normal case should not be hurried, even though the case prove somewhat tedious, and the practice of giving drugs, and especially pituitrin, to increase pain is reprehensible and cannot be too strongly condemned. After the onset of pain if the cervix seems rigid and the patient nervous and unwilling to bear much pain, morphine, ¼ grain, by hypodermic and repeated in four to six hours if necessary will keep the patient fairly comfortable and in a more equable frame of mind, and at the same time aid greatly in the way of dilatation. This is safe and does no harm to either mother or child. Further than morphine, in the normal case, though slow, I do not consider anything necessary except time and if the patient's color remains good, and her pulse rate within reasonable limits, no alarm should be felt even though progress is slow. If symptoms are present, or arise during the first stage, that force us to hurry, the patient should be relaxed with morphine, and after two or three fingers dilatation, obliteration can be hurried by gentle pressure inside the cervix with a clean hand, during and between pains. If there is cause to hurry, the patient should be encouraged to make pressure with each pain. Rupture of the membranes after a fair amount of dilatation has been obtained, will let the head come in contact with the lower uterine segment and hasten dilatation in some cases, but no attempt should be made in the average case to rupture the membrane until we have a fair amount of dilatation. Morphine, gentle manipulation inside the cervix with a clean hand, rupture of the membranes, with instruction to the patient as to the manner of bearing to each pain are the only measures that I consider safe or necessary until dilatation is complete. This stage requires far less time with some patients than with others, but no attempt at delivery should be made until obliteration of the cervix is complete, thus announcing the commencement of the second stage.

At the beginning of the second stage, the patient should be told that the favorable outcome depends largely on her patience, her willingness to bear some necessary pain and her co-operation generally until delivery is complete. Most patients, when instructed sympathetically and understandingly, will be found willing to help. She should be told that the safe delivery of her baby and the conservation of herself takes time, patience and pain. I do not mean needless pain, but I do not believe the time will ever come when labor can be accomplished in a safe manner without some necessary pain.

This stage lasting from complete dilatation of the cervix to delivery of the child, can be made much easier for the patient and far safer for the child provided we are willing to help. As stated before, the first stage if normal requires very little help, but to sit through the second stage and offer no assistance does not seem a very humane procedure to me. The danger from vaginal examinations provided the hand is clean has been very much exaggerated, and I believe that very few puerperal infections of any seriousness can be traced to that cause. Personally, I think it safe to keep a clean hand in contact with the presenting part during as much of the second stage as is possible. Rectal examination affords little information to the average man, and is mentioned in the literature far more often than used in practice. In fact, I believe that rectal examination, with the average man in general practice, for obstetric examination, is almost a mythical procedure. Morphine will take the edge off the pain and cause the patient to be more willing to try to help herself. Then by keeping the hand in contact with the presenting part, and at the same time instructing the patient as to the manner of bearing to each pain, the labor can be made shorter and very much easier for the patient and correspondingly safer for the baby.

Much time can be lost and the patient caused needless suffering, if we assume the attitude that our duty is fulfilled when we have tied and cut the cord and delivered the placenta. Every pain should be watched and the patient instructed when to bear, position to hold herself, and when to relax for next pain. The average patient will accomplish much more with each pain when given proper and sympathetic help, and only in this way can we be sure of the progress the case is making and be prepared to meet emergencies should they arise. In the second stage we should know every minute of the time the condition of the patient and the progress of the labor. Some men condemn the use of pituitrin in the second stage of labor, but where the pains lack force and rhythm I have yet to see any harm result from the judicious use of the drug in small doses. The amount given should not exceed three to five minims, and repeated when necessary. Then, if the drug helps at all, the pains will have more force, and the patient will be able to use her muscles to better advantage. As the labor nears completion and the presenting part nears the outlet, the soft parts should be protected in every way possible. This can be done by the careful administration of chloroform as the pains reach their intensity and pressure in an upward direction over the perineum. Then, wherever possible, the presenting part should be delivered between pains.

The third stage usually requires less time but should receive just as careful attention as either the first or second stage. If no bleeding or other symptom occurs to cause immediate removal, the placenta may be left alone for twenty to thirty minutes or until the uterus rises up out of the pelvis, then with the cord held tense without traction with the right hand, firm pressure with the left hand on the fundus of the uterus in a downward direction, at the same time having the patient bear down, will usually remove the placenta with ease and facility. If bleeding to any extent occurs, clots should be removed and the uterus kneaded through the abdominal wall until firm contraction is felt beneath the hand. Then one cubic centimeter of pituitrin should be given to give tone to the uterine muscles. The last and a very important step is to give regularly and routinely one-fourth grain of morphine by hypodermic. This promotes rest and prevents hemorrhage.

Repair.—The repair of the perineum when damaged should properly be considered in the management of the third stage of labor. Some very capable men do not advise immediate repair, claiming better results from a secondary operation. Personally, I believe immediate repair should always be done, unless some urgent condition of the patient makes postponement necessary. Where properly done, the results will in most cases be all that could be wished for, and even though we should fail to obtain union, we still have recourse to a secondary operation. Then again, when immediate repair is done many patients will have a satisfactory perineum who would never come up for secondary operation.

No special technique is needed. If much contusion has occurred, debridement should be done when necessary. The extent of the tear can be easily determined by sight and touch, then beginning inside, sutures of material that will hold for ten or twelve days should be placed close enough together to coapt the torn surfaces and tied in such a manner that the tissue will not be cut through. After inside repair has been done and the parts carefully inspected, the outside should be closed last. Beginning posteriorly at the bottom of the tear, deep sutures should be placed reaching forward to the fourchette; these sutures should hold from twelve to fourteen days and should also not be tense enough to injure the tissues. No great amount of after treatment is necessary in most cases. The patient should be instructed to keep the thighs close together if necessary by passing a towel around them, and the parts should be kept clean. With these simple measures we will in most instances get good results and the patient will be saved much inconvenience and the necessity and expense of secondary repair.

Relief of Pain.—In the conduct of the obstetric case relief of pain, of course, has its place, and should be considered important. The patient should be relieved, in so far as is possible and safe, of undue pain, but the routine and indiscriminate use of anesthesia, or drugs calculated to relieve pain, is never so necessary as the social workers, and some members of our own profession would have us believe. Morphine comes first and can be considered safe for most cases, and will do much in the way of relieving undue pain. When anesthesia proper becomes necessary the list to be chosen from that can be considered safe is small. Ether, where version or difficult forceps is to be employed, is still by far the safest anesthetic. Gas-oxygen can be used safely but requires someone with experience to administer. Chloroform toward the end of labor is safe in most cases. The Gwathmey method, twilight-sleep, the barbiturates, sodium amytal and such measures, however favorably spoken of by many are NOT without danger, and in the average hands unsafe, and I do not feel safe to use outside the hospital.

Version.—The question of changing the position of the child confronts us all at some time, and the matter must be given careful thought. There is no question that delivery can be facilitated in some cases by version, either from breech to head or from head to breech, but the case must be selected with care and good judgment used. The change of position sounds easy in the textbook case and in the hands of someone thoroughly trained in its use, but often becomes a very difficult procedure at the bedside. Unless some gross abnormality occurs, such as shoulder or transverse position, that makes version mandatory, I invariably let the case progress in the usual way. If the head presents and the delivery can be completed even though by forceps, I feel that a safer method than version in most of the cases encountered. Where the head presents and the child is large and especially in primiparous patients, we are almost sure to lose the child before version and delivery can be accomplished. Also the danger from infection will be greatly multiplied. The conversion of a breach to a head unless the pelvis is large and the child small is an extremely difficult procedure and seldom worth the effort. When the breech presents, and no marked disproportion exists and the condition of the mother is good, no great concern need be felt as the average case when given proper care and plenty of time will deliver in a satisfactory manner.

Eclampsia. — Fortunately, proper prenatal care as practiced at the present day is saving many lives, and in no condition is the benefit of such care more apparent than in the lessened number of cases of eclampsia that we see. However, regardless of the care received, a case of eclampsia will develop now and then when least expected, and when encountered the management will have to be determined for each individual case. In the earlier months and in some cases near term, palliative measures and expectant treatment may be instituted and in many cases the convulsions controlled and the patient go on to normal delivery. When the convulsions occur in labor and dilatation can be safely secured, whether the patient is a primipara or a multipara makes little difference and delivery should be accomplished as speedily as possible by forceps or version if necessary. When convulsions occur at or near term in a primipara without dilatation, or even a multipara without dilatation and a rigid cervix, I feel that Caesarean section offers the best chances at least for the child. As to the best method of expectant treatment, some of the older and time tried measures are safest still—morphine to effect, to quiet the nervous system, veratrum to dilate the blood vessels and to lower blood pressure. Magnesium sulphate may be given intramuscularly or intravenously and chloroform may be used to some advantage where convulsions come close together. This, with brisk and thorough purgation, I think about covers the field of safe measures.

Caesarean section.—I only mention Caesarean section to stress the extreme importance of the early recognition of the cases where mother or child, or both, would have better chances by section. These are eclampsia near term with no dilatation, and where the convulsions cannot be controlled by palliative measures, eclampsia at term in a primipara with no dilatation, or even multipara with rigid cervix without dilatation, contracted or deformed pelvis, which should be known in the early months of pregnancy, cases with a badly damaged heart that has escaped recognition till pregnancy is far advanced. The above cases I feel will have better chances by section and the operation can be made selective with a minimum of unnecessary examinations. Then we all encounter grave cases at some time in our lives, where the labor is far advanced and conditions such, that we are called upon to advise section in the hope of saving the lives of mother and child or either. Fortunately this does not occur so often. I believe where possible, every case that goes to section should have the utmost care used in selection and then when done by a conscientious and capable surgeon the results will be uniformly good in most cases.

Placenta Previa.—Placenta previa can be discussed in a few words. This dangerous condition must have good management to safeguard the interests of both mother and child. Where the placenta is marginally attached and no excessive bleeding has occurred, and the presenting part can be made to engage, the delivery can usually be completed without too much risk. But where the placenta is central I consider hospitalization a necessary measure.

Forceps.—I will not try to outline the indications for the use of forceps, for the indications will have to be decided with each individual case and every man who practices obstetrics should make himself thoroughly familiar with the use of forceps. This is not difficult provided we use judgment, do not hurry, and above all do not use too much force. The use of forceps in labor is still considered by the laity as a measure of extreme danger to both mother and child, and I believe most thinking men will agree that the use of forceps has been abused for various reasons, mainly I think to save time on the part of the attendant. On the other hand, the same skillful and conservative use of forceps can be made one of the most helpful measures that we can give to our patients. Discrimination should be used and we should not wait till the life of the child is hopeless before using forceps. Neither should we try to apply forceps before the cervix is completely dilated and the presenting part firmly engaged. If sufficient time is given for complete dilatation and thorough engagement very little force, if any is necessary in the application of forceps. The weight of the forceps following the fingers will carry the blades into correct position, then with the blades in place, gentle rotation will cause the instrument to lock firmly and easily. Traction should be a matter of skill instead of brute force and should be made with the pains. Where care is used in the application and traction done in proper manner, no harm should be done either mother or child in the use of forceps.

DISCUSSION

Dr. J. M. Acker, Jr. (Aberdeen): I appreciate greatly the privilege of discussing Dr. Boyd's paper, not that I can particularly add anything to it, but due to the fact that I have known Dr. Boyd for a number of years and know the character of work he is doing, and anything that he may say, I know is well worth while.

Dr. Boyd, in the beginning of his paper, states that there is serious doubt as to where the patient should be delivered. In my humble judgment, if circumstances permit, I think that every maternity case should be delivered in the hospital, and I so advise; however, in a great many cases that is impossible, and my idea is that we have to accept the conditions and do the best we can wherever the case may be delivered.

I agree with the doctor in his pre-natal care and his care of labor itself. I think as he does that nature is a wonderful thing, and I am certainly an advocate of watchful waiting. I believe that if patience is exercised a great many times, the difficult case will be clear in a short while. I believe that pain should be kept at the minimum, and, of course, Dr. Boyd has mentioned a number of drugs that may be used. Recently I have had a good success with rectal injection of sigmoidal, and I think that can be applied in the private home.

As to complications, I think one of the most distressing complications is threatened eclampsia, and, of course, we use the measures advocated by Dr. Boyd. I also sweat my patients. Here recently I have had a rather troublesome case that I have been able to carry along. I hope I am still carrying it along, and unless something happened last night I am — sweating the patient every other day, requiring free elimination and keeping her in bed, etc.

As to repair work, I think that the repair work should be done immediately, and I think an episiotomy, and it can be done in private homes, will help you in your repair work; in other words, I think episiotomy can be done a great deal easier than a jagged perineal tear repaired. I do not know of anything more I can add, but I want to thank the doctor again for the excellent presentation of his paper.

Dr. J. W. Lipscomb, Jr. (Jackson): I think we are greatly indebted to Dr. Boyd for this splendid presentation of his subject. These obstetric cases cannot be hurried; if they are, they get into trouble. That paper could not have been presented in the short time allotted to it. I think we did well to wait a little bit longer to hear what Dr. Boyd had to say.

I agree with Dr. Acker that, where it is possible, and the patient can afford it, from the patient's standpoint and from that of the doctor, it is much more convenient, much more satisfactory, and, of course, we are better prepared to take care of our cases in the hospital. I personally try to get all of mine to go to the hospital, but I realize that a great many people out in the rural districts, not in close contact with the hospitals, cannot get to them. Under those conditions we have to make the most of it and from the standpoint of actual statistics, which are open to question, the home is still the safest place for obstetrical cases. The last report of statistics from the Metropolitan Life Insurance Company bears this out, but where those statistics are open to question is when the case gets bad we take her to the hospital, and therefore, the hospital gets credit for the deaths.

On the other hand there is something to people building up an immunity to their own surroundings. I think a great many cases go to the hospital, and probably are cared for by the general duty nurse who waits on surgical cases, and who might go from an erysipelas case down to the obstetrical case.

We run into infections in the hospitals in a great many instances when it is not necessary, while if the patient had remained at home the great probability is she would not have had any sepsis. I remember a few years back I came home from medical school, and I was all enthusiastic about the treatment of puerperal sepsis and I asked my father what he did for those cases, and he said he didn't have them. I don't know whether he had or not, but after all, the most of his cases were delivered in the home, and they were rare. Still we were seeing them in the hospital all the time.

I enjoyed Dr. Boyd's paper very much. It was very constructive, and I think his management particularly of the prenatal cases and his management of the cases in labor were fine. I enjoyed the paper, and would like to hear some more discussion on the subject.

Dr. G. S. Bryan (Amory): I have been a member of this Association for 35 years. I have attended practically every meeting. I have heard many papers read on this subject. I have heard the best one today I have heard since I have been coming here. I do not care to go into a detailed discussion of the paper, but I do want to say a few things about the man who presented the paper. I have known Dr. Boyd since the day he began to practice medicine. He is my neighbor—lives within a few miles of me, and I have been associated with him during all these years and have watched him, and I know about his work. He does a very extensive practice—a rural practice, and he does a very splendid work. He is a thoughtful man, he is a very modest man, therefore, we seldom hear much from him. We have to know him to appreciate him.

Now, as to the paper. The discussions that Dr. Acker and Dr. Lipscomb made were very good, but I am afraid that the idea will develop that Dr. Boyd opposes hospitals. That isn't true; he takes many patients to the hospital, but his idea, I am sure, was how to manage the cases that you can't get into the hospital, and he has told us exactly how. If we remember his instructions and carry them out, why we will indeed not feel very much apprehension even if we don't get our patients to the hospital.

I am not doing obstetrics and have not for a good many years, but I did my share in the early years and there is only one thing that I want to bring up and that may make you think I am a little old fashioned, and yet I try to keep right up with all medical questions, and that is the use of veratrum in eclampsia. Gentlemen, it works. Regardless of what any man thinks and what any man says, I know it works, because I have tried it, and I have never seen it fail. You can control your eclampsia with the proper dosage and the proper administration of the drug.

I came down to Jackson yesterday morning in the same car with Dr. Boyd, and he said, "I thought I might not be able to get here, I had an obstetrical call at daylight the day before and I found an eclampsia case." I said, "What did you do?" He said, "I gave veratrum and the patient sweated," and, as Dr. Acker says, it is the best thing to sweat them for a time. He delivered the case, everything was lovely, and the goose honks high, mother and child both safe and sound. On Saturday another one of my neighbors, Dr. Tubb of

Smithville, dropped into my office and said, "I am having a rather distressing time, I have a patient with threatened eclampsia, and she is a month or six weeks away. I am giving her veratrum and she is doing nicely, and I expect to carry her through," and he will carry her through because he gets results. But I want to say—don't forget veratrum in eclampsia. It is a dieuretic and a diaphoretic and will cause vomiting if given in full dosage. If that doesn't eliminate, what does?

Dr. Boyd (closing): I just want to thank the gentlemen for the discussion, and thank you for your patience in listening to that long harangue.

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Mississippi State Medical Association

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Papers and news material for publication should be received not later than the fifth of the month preceding publication.

The editors are not responsible for statements made by any contributor.

Manuscripts and all material for publication should be addressed to the editor, P. O. Drawer 231, Vicksburg, Mississippi.

EDITORIALS

FROM OUR PRESIDENT-ELECT

To the Members of the Mississippi State Medical Association

Dear Friends:

As the time draws near for the annual gathering of the Association, the president-elect is very anxious to stress the wonderful opportunity this meeting will offer to all attending—to increase the medical knowledge, to enjoy the fellowship of kindred spirits, and to take "time out" from the busy work-a-day life of the practitioner.

President Green and his able committees have spent much effort to make this occasion an outstanding one in the history of Mississippi medicine, and the essayists are of such unusual ability that every forward looking doctor will surely be interested in and instructed by the speakers.

Probably there is no more pleasant site for a convention than our famed Gulf Coast offers, and the medical men of that section are determined to make it even as fine as past experience has shown it to be. So bring the "Missus" for there will be "big doings."

At a time like this, when paternalism in government is extending its influence into channels heretofore regarded as exempt from such regimentation, it is not at all surprising that medicine should come within the orbit of such artificial manipulation, and its proposed legislation may revolutionize medical procedure.

Under such circumstances sound statesmanship is needed and regardless of rank and file of the membership, every member should be present at this session, to offer his advice, judgment and influence toward shaping the policies of the Association, which in turn will have its part in determining the agenda of the American Medical Association.

During the past eleven months your president-elect has worked hard to advance the cause of organized medicine in the societies and out among the people, learning something of the problems confronting rural and urban medicine in Mississippi; and though he has traveled 3,916 miles during this time in his official capacity, he regards it as worthwhile, because he has enjoyed the fellowship of real men and women in the profession, renewed old acquaintances, made new friends, becoming more and more certain of the gigantic task organized medicine faces, and has been impressed in no uncertain way of the salutatory fact that no one part of Mississippi has a monopoly of good doctors.

Your president-elect feels very sensibly the responsibility that will soon become his, and he urges you to come and help him, to advise him, suggest ways and means and at all times to regard him as your servant.

As a great Roman senator was accustomed to close his orations, regardless of what the subject was, with the admonition, "Carthage must be destroyed," so your president-elect must continue to emphasize:

"Organized medicine needs every doctor, and every doctor needs organized medicine."

J. P. Wall, president-elect

Jackson,
March 29, 1939.

SCIENTIFIC EXHIBITS

I am chairman of the Scientific Exhibits of the Mississippi State Medical Society, and I wonder if you will, through the medium of the Mississippi Doctor, ask any doctors interested in a display at our State Medical Society, to communicate with me.

Archibald C. Hewes

Gulfport,
March 21, 1939.

TREASURER'S REPORT
MEDICO-LEGAL FUND
DECEMBER 31, 1938

Balance on Hand as Shown by Last Report $11,200.69

Receipts:

JUNE 10, 1938

Interest—

Meridian Bank, No.	14	$12.50
	15	12.50
	19	12.50

U. S. Treas. No.	10123C	15.00		
	33593C	16.25		
	10124D	15.00	$83.75	83.30
Less Bank Charges			.45	

JUNE 24, 1938

Interest—Wayne Co. Bonds			25.00	
U. S. No.	E00053085	$10.00		
	J00169839	20.00		
	K00169840	20.00		
	A00169841	20.00		
	A00183841	20.00		
	B00183842	20.00		
	C00183843	20.00	130.00	
Total			155.00	
Less Bank Charges			1.33	153.67

OCTOBER 11, 1938

Interest—U. S. No.	35593C-9	$16.25		
U. S.	10124D—26	15.00		
U. S.	10123C—26	15.00		
City of Meridian		12.50	58.75	
Less Bank Charges			.25	58.50

DECEMBER 11, 1938

Interest—U. S. No.	E00053085	$10.00		
	J001169839	20.00		
	K00169840	20.00		
	A00169841	20.00		
	A00183841	20.00		
	B00183842	20.00		
	C00183843	20.00	130.00	
Less Bank Charges			.13	129.87
				12,627.03

DECEMBER 30, 1938

Dr. T. M. Dye, Secretary	1,001.00

Total Available Funds and Securities:

Disbursements—

April 20, 1938		
Dr. W. H. Diamond, Legal Defense	150.00	
May 20. 1938		
Bank of Clarksdale, Lock Box	5.00	
August 18, 1938		
Dr. M. E. Lapham — Medical Education Extension Work	1,500.00	
Total Disbursements		$1.655.00
Balance in Medico Legal Fund, Dec. 31, 1938		$10,972.03

TREASURER'S REPORT
ASSOCIATION FUND

DECEMBER 31, 1938

Balance on Hand as Shown by Last Report		$1,889.39
Receipts:		
June 10 — Dr. T. M. Dye, Secretary	2,000.00	
December 30 — Dr. T. M. Dye, Secretary	210.40	
Total Receipts		2.210.40
Total Funds Available		$4.099.79
Disbursements:		
Jan. 1. *The Mississippi Doctor* — Journal, Oct.-Dec.	$216.00	
Jan. 1. Error in Bank Deposit	.03	
Feb. 7. Mississippi Engraving Co.—cuts for paper	10.00	
March 31. *The Mississippi Doctor*—Journal, Jan.-Mar.	216.00	
April 10. Mrs. George Anderson—Reporter	100.00	
April 26. Clarksdale Printing Co.—Programs	66.87	
April 27. L. S. Lippincott—Editor's Expense Acct.	75.00	
May 3. Dr. Felix J. Underwood—P. P. & L. Account	118.75	
May 3. Dr. W. L. Little—President's Expense Acct.	200.00	
May 4. Register Publishing Co.—Registration Cards	6.50	
May 9. Dr. L. L. Minor—Councilor's Expense Account	13.85	
May 9. Dr. E. L. Wilkins—Treasurer's Expense Acct.	21.50	
May 9. Ellis & Hirsberg—Auditing Treasurer's Account	15.00	
May 9. Dr. W. H. Watson—Councilor's Expense Acct.	7.50	
May 9. Dr. W. H. Frizell—Secretary Council Expense	24.10	
May 9. Dr. R. B. Caldwell—Councilor's Expense Acct.	7.20	
May 9. Dr. T. J. Brown—Councilor's Expense Acct.	14.50	
May 9. Dr. J. G. Gardner—Councilor's Expense Acct.	12.20	
May 19. Miss L. H. Stone—Reporter	10.00	
June 10. Dr. L. S. Lippincott—Editor's Expense Acct.	75.00	
July 6. *The Mississippi Doctor*—Journal, Apr.-June	221.85	
July 15. Mississippi State Board of Health—Appropriation	150.00	
Aug. 25. Register Publishing Co.—Printing Transactions	443.50	
Aug. 13. American Medical Ass'n. — Code of Ethics, 1 M	30.00	
Oct. 1. *The Mississippi Doctor* — Journal, July-Sept.	224.10	
Total Disbursements		$2,279.45
Balance on Hand December 31, 1938		$1,820.34

SUMMARY

Balance in Medico Legal Fund	$10,972.03
Balance in Association Fund	1,820.34
Total Treasurer's Debit	$12,792.37

ACCOUNTING

Balance on Hand, Bank of Clarksdale					$2,792.37
Securities Held:					
U. S.	44-54	No. J00169839	4%	$1,000.00	
	44-54	K00169840	4%	1,000.00	
	44-54	H00169841	4%	1,000.00	
	44-54	A00183841	4%	1,000.00	
	44-54	B00183842	4%	1,000.00	
	44-54	C00183843	4%	1,000.00	
	44-46	E00053085	4%	500.00	
	44-46	35593C	3¼%	1,000.00	
	51-55	10123C	3%	1,000.00	
	51-55	10124D	3%	1,000.00	
City of Meridian—1939--13				500.00	10,000.00
Total Cash & Securities Held					$12,792.37

Dr. E. LeRoy Wilkins, Treasurer,
Mississippi State Medical Association,
Clarksdale, Mississippi.

Dear Dr. Wilkins:

Your accounts as Treasurer of the Association for the calendar year 1938 have been audited by us, and we take pleasure in submitting statements of all receipts and disbursements had during the period under review relating to both the Association General Fund and the Medico-Legal Fund.

Balance to credit these funds as at December 31, 1938, has been proven against the securities in hand and the bank balances are found correct.

Trusting that the report supplies the Association with all needed information, it is,

Respectfully submitted,
Ellis & Hirsberg
By Jos. F. Ellis, C. P. A.

Clarksdale, Mississippi,
February 4, 1939.

REPORT OF COUNCILORS

SECOND COUNCILOR DISTRICT

In my column of last month, I anticipated somewhat the request of our esteemed editor-in-chief Dr. Leon S. Lippincott when he asked from this district a report. The reports from the county secretaries are not complete but they will be better than last year. We will continue actively along these lines.

Respectfully,
L. L. Minor, Councilor.

THIRD COUNCILOR DISTRICT

The Third Councilor District comprises the thirteen northeast counties, namely Alcorn, Tishomingo, Prentiss, Itawamba, Lee, Monroe, Pontotoc, Chickasaw, Calhoun, Clay, Lowndes, Oktibbeha, and Noxubee, and these counties compose the Northeast Mississippi Thirteen-County Medical Society. Quarterly meetings are held on the second Tuesday in March, June, September and December. The interest is fine and there are about 125 to 150 doctors in attendance at each meeting. Programs are made up of local talent and one visiting essayist who is considered outstanding in his field.

We have a membership of 150 this year against 125 last year, an increase of 20%. There are eight negro doctors, twenty-three doctors retired, nine semi-retired, and thirty that should be members.

The spirit, interest and co-operation have been the best and in most every county we have monthly meetings of the county doctors and these meetings are usually well attended. Your councilor met with most of these once this year and took an active stand against the proposed plan of practice that was being advocated by the Farm Rehabilitation Group. So far as I know not one of our counties contracted with them.

We have had one suit threatened this year but it was dropped and I feel it is over for good.

I cannot resist the opportunity of saying that the Third Councilor District has the most progressive, hardworking, well prepared group of doctors that can be found in any section of the state; in fact, I think they are the best to be found anywhere.

Several new men have moved in this year and all have been admitted to the society. We have had no deaths to date this year.

Submitted
R. B. Caldwell, Councilor.

Reserve the right to supplement this report in May for we will have more members.
Baldwyn,
April 3, 1939.

FIFTH COUNCILOR DISTRICT

This district consists of three medical societies; the Central Medical Society consisting of seven counties; the Issaquena-Sharkey-Warren-County Medical Society, consisting of three counties, and the Claiborne County Medical Society; a total of eleven counties in the Fifth Councilor District.

The total number of white physicians registered in this district is 287. There are 222 in the Central Medical Society with a paid-up membership of 156 at this date. The total number of physicians in the Issaquena-Sharkey-Warren County Medical Society is 57 doctors, with 39 members. There are eight doctors in Claiborne County, but the Councilor has been unable to obtain information from the secretary at this time.

As you will see from the attached tables, there have been 36 doctors moved into this district and 24 doctors have moved out. 12 doctors have died since the first of February, 1938. The membership in the Central Medical Society is not as large as that for 1938, but the membership in the society of the Vicksburg district is slghtly larger.

The co-operation and spirit of the physicians in this district has been apparently exceedingly fine for the past year. There have been no threatened liability suits brought to the attention of the Council from this district. The meetings have been well attended and there have been two special meetings put on by the medical schools for the Central Medical Society, and the Vicksburg District had an unusual annual meeting. The spirit and co-operation of the doctors in the Issaquena-Sharkey-Warren County Medical Society seems to be better than that of any other society in this district. There are five members of other societies belonging to the medical societies in this district as shown by the attached table.

The Councilor has visited the Issaquena-Sharkey-Warren County Medical Society twice, and though an attempt has been made to meet with the Claiborne County Medical Society this has not been done. It is the feeling of the Councilor that the Claiborne Medical Society should maintain its identity as a county medical society, but if it could meet with the approval of the Claiborne County Medical Society and the Issaquena-Sharkey-Warren County Medical Society, due to the recent pavement of roads, it is believed that it would be more profitable for both societies to combine into one with its central meeting place in Vicksburg. As Councilor and for the good of the medical profession, I would be glad to recommend this union if it should be favorable to all parties concerned.

The only business which has been presented to this Councilor for action was that of the approval or the disapproval of the medical film, "The Birth of a Baby," sponsored by Dr. Fred Adair from the University of Chicago, which was referred to the Chairman for action by the Council.

All of the members of the medical societies of this district have lived in great harmony throughout the year and it is urged that an increase in membership for all the societies be attempted.

1939 DATA FOR COUNCILLOR — CENTRAL DISTRICT

	Hinds	Leake	Madison	Rankin	Scott	Simpson	Yazoo	Issaquena	Sharkey	Warren	Claiborne
1. Total Physicians in District	119	15	14	17	11	22	24	2	15	40	8
2. Members 1939	88	12	8	15	7	15	11	1	8	30	?
3. Members 1938	101	14	9	18	7	14	14	1	8	29	?
4. Moved in 2-1-38 to '39	15	1	5	5	1	5	3	0	1	0	?
5. Moved out 2-1-38 to '39	8	3	6	2	1	0	2	0	0	2	?
6. Died 2-1-38 to '39	5	2	1	0	0	0	1			2	1
7. Threatened Liab. Suits											
8. Life Members										1	
9. Number Meetings	10	10	10	10	10	10	10	11	11	11	?
10. Average Attendance	105								30.1		?
11. Special Meetings	2										?

3 members of Central from Copiah and 2 from Smith County.

Lawrence W. Long,
Councilor of Fifth District.

Jackson,
April 7, 1939.

SIXTH COUNCILOR DISTRICT

To the House of Delegates,
Mississippi State Medical Association:

A splendid year has been enjoyed by the East Mississippi Medical Society which is composed of Lauderdale, Newton, Neshoba, Winston, Kemper and Clark Counties and comprises the Sixth District.

Well attended meetings have been held, at which excellent programs have been presented.

The percentage of members having paid their dues is not as good as we would like and an effort is being made to improve this condition for the next annual period.

County	Members	Members paid
Lauderdale	49	42
Newton	16	8
Neshoba	12	9
Winston	9	6
Kemper	12	7
Clark	10	2

Three new members have been received: Dr. D. H. Moore, Meridian; Dr. M. L. Flynt, Jr., Newton, and Dr. G. T. Vise, Meridian.

No law suits have been filed against any of the physicians of the sixth district since our last state meeting

Respectfully,

H. Lowry Rush,
Councilor.

Meridian,
April 8, 1939.

DELEGATES TO THE MISSISSIPPI STATE MEDICAL ASSOCIATION

As of April 1, the delegates to the Mississippi State Medical Association thus far recorded in the secretary's office are as follows:

Adams County Society: L. S. Gaudet, Natchez.

Clarksdale and Six-County Medical Society: J. P. Walker, Lambert; J. G. Blackstrom, Tutwiler; M. B. Jernberg, Hollywood; S. D. Robinson, Clarksdale.

Coast Counties Society: W. W. Lake, Pass Christian.

DeSoto County Society: A. L. Emerson, Hernando.

Issaquena-Sharkey-Warren-County Society: J. A. K. Birchett, Jr., Vicksburg; W. C. Pool. Cary; W. H. Scudder, Mayersville.

North Mississippi Society: G A. Brown, Water Valley; S. E. Eason, New Albany; C. M. Murray, Ripley; W. W. Phillips, Oxford; E. A. Thorne, Holly Springs; G. H. Woods, Batesville.

Northeast Mississippi Thirteen-County Society: W. A. Toomer, Tupelo; C. B. McCowan, Aberdeen; E. K. Guinn, Prairie; S. A. Hill, Corinth; J. A. Rayburn, Pontotoc; W. J. Aycock, Calhoun City; D. D. Baugh, Columbus; L. B. Blackstone, Iuka; H. L. Scales, Sr., Starkville; L. B. Morris, Macon; A. K. Naugle, West Point; L. L. McDougal, Booneville.

Pike County Society: R. H. Brumfield, McComb.

Tri-County Society: A. B. Harvey, Tylertown; D. T. Langston, New Hebron; J. C. McGuire, Hazlehurst; R. C. Massengill, Brookhaven.

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION

A full report was made by the Committee on Public Policy and Legislation to the House of Delegates at the annual meeting of the State Medical Association last April (1938) following the regular session of the Legislature. This report was published in the MISSISSIPPI DOCTOR.

The only legislation passed during the extraordinary session beginning July 6 and ending August 20 (1938) was House Bill No. 120 giving the Mississippi State Board of Health Examiners (the State Board of Health) authority and power to suspend or revoke for certain causes the licenses of physicians and osteopaths. A copy of the bill is enclosed. This will be made to the State Medical Association at Gulfport when the meeting is held in May.

The Committee on Public Policy and Legislation will have a meeting or meetings prior to the 1940 regular session of the Legislature for the purpose of considering legislative matters and receiving suggestions from officers and members of the State Medical Association relative to desirable or necessary legislation to present to the Legislature.

Sincerely yours,

Felix J. Underwood

House of Delegates
Mississippi State Medical Association
Gentlemen:

HOUSE BILL NO. 120

Section I. Be it enacted by the Legislature of the State of Mississippi, that section 5863, code of 1930, be amended so as to read as follows:

5863. The Mississippi State Board of Health may on its own initiative or on complaint suspend or revoke for any cause named below any license that has been issued that authorizes any person to practice medicine, osteopathy, or any other method of preventing, diagnosing, relieving, caring for, or curing disease, injury, or other bodily condition; and said board is furthermore authorized and empowered to direct the cancellation in the office of the clerk of any circuit court of any record of any license so suspended or revoked.

1. The causes for which a license may be suspended or revoked and the record of such license cancelled are as follows:

(a) The habitual personal use of opium, of coca leaves, of cannabis, or of any preparation or derivative of any of them, hereinafter referred to as 'narcotic drugs.'

(b) Administering, dispensing, or prescribing any narcotic drug aforesaid otherwise than in the course of legitimate professional practice and for the prevention, alleviation, or cure of disease or for the relief of suffering, and not primarily for the purpose of catering to the cravings of an addict.

(c) Conviction of violation of any federal or state law regulating the possession, distribution, or use of any narcotic drug aforesaid.

(d) The use of alcohol or any beverage or liquor containing alcohol, or of any drug, in such manner as incapacitates the licentiate for professional practice.

(e) Procuring, or attemption to procure or pretending to procure, an abortion that is not necessary to preserve the life of a pregnant woman.

(f) Conviction of a misdemeanor involving moral turpitude or of a felony.

(g) Fraud or deception in obtaining a license to practice.

2. The state board of health, however, shall not suspend or revoke a license unless and until the board has caused written notice to be served on the licentiate to be proceeded against, hereinafter referred to as the respondent, informing him of the charges against him and appointing a time, not less than ten days after the service of notice, and a place when and where he may appear in person or by attorney to defend himself against such charges. Such notice may be served on the respondent personally or by registered mail addressed to him, post paid, at his last known address.

3. The board may subpoena persons and papers on its own behalf and on behalf of the respondent, may administer oaths, and may compel the testimony of witnesses. It may issue commissions to take testimony, and testimony so taken and sworn to shall be admissible in evidence for and againt the respondent. The board shall be entitled to the assistance of the chancery court or the chancellor in vacation, which, on petition by the board, shall issue ancillary subpoenas and petitions and may punish as for contempt of court in the event of noncompliance therewith. A hearing authorized by this section may either be public or private, as the state board of health deems to be in the public interest.

4. The board may make public its orders and judgments in such manner and form as it deems proper. It shall in event of the suspension or revocation of a license direct the clerk of the circuit court of the county in which that license was recorded to cancel such record.

5. Any person aggrieved by the action of the board may petition the circuit court for a writ of certiorari, and that court after a hearing may modify, affirm, or reverse the judgment of the board or may remand the case to the board for further proceedings. A petition for a writ of certiorari must be filed within twenty days, immediately following the service of the respondent of a copy of the order of judgment of the board, unless the court, for cause shown, extends the time. If the state board of health in due course appeals from any decree of the court, no bond shall be required of it in order to perfect its appeal.

6. Every order and judgment of the board shall take effect immediately on its promulgation unless the board in such order or judgment fixes a different date. It shall continue in effect, notwithstanding an appeal by the respondent, unless the court, on the issue of a writ of certiorari, by injunction, or other decree terminates it earlier.

7. Unless the court otherwise decrees, a license that has been suspended by the board for a stated period of time shall automatically become valid on the expiration of that period and a license that has been suspended for an indefinite period shall become again valid if and when the board so orders, which it may do on its own motion or on the petition of the respondent. A license that has been revoked shall not be restored to validity except: (1) after a rehearing by the board, on petition of the respondent, for good cause shown, filed within ten days, immediately following the service on him of the order or judgment of the board revoking his license or (2) by order of the court, on petition as aforesaid. Any licentiate whose license becomes again valid after a period of suspension or after it has been restored to validity after a rehearing or by an order of the court, shall record it again in the office of the clerk of the circuit court of the county in which he resides in conformity with the requirements of section 5854.

Section II. Nothing in this act shall be construed as limiting or revoking the authority of any court or of any licensing or registering officer or board, other than the state board of health, to suspend, revoke, and reinstate licenses and to cancel registration under the provisions of section 16, chapter 289, laws of Mississippi, 1936

Section III. That this act shall take effect and be in full force from and after its passage.

Approved August 10, 1938.

Respectfully submitted,

W. H. Anderson, M. D., Member
Henry Boswell, M. D., Member
Felix J. Underwood, M. D., Chairman
Committee on Public Policy and Legislation Mississippi State Medical Association.

Jackson,
April 8, 1939.

MEDICAL EXAMINATION NOTICE

The Mississippi State Board of Health will hold examinations for license to practice medicine at the Robert E. Lee Hotel (Convention Hall) in Jackson on June 21 and 22, 1939.

Examination on first two years, Wednesday, June 21. Send or bring certificate for verification.

Examination on last two years, Thursday, June 22. Send or bring medical diploma for verification.

For application blank write to:

Dr. R. N. Whitfield,
Assistant Secretary,
State Board of Health,
Jackson, Mississippi.
April 14, 1939.

PROGRAM TENTH ANNUAL MEETING MISSISSIPPI STATE HOSPITAL ASSOCIATION

Officers 1938—1939

President—H. Lowry Rush, M. D., Meridian

Vice-president—Gilruth Darrington, M. D., Yazoo City.

Secretary and treasurer—Leon S. Lippincott, M. D. Vicksburg.

Board of Directors

H. Lowry Rush, M. D., Meridian; Gilruth Darrington, M. D., Yazoo City; Leon S. Lippincott, M. D., Vicksburg; J. G. Gardner, M D., Columbia; A. Street, M. D., Vicksburg.

All members of the Mississippi State Medical Association, their ladies and guests are cordially invited to attend all sessions and the dinner dance

PLEASE PURCHASE DINNER TICKETS EARLY

Monday Morning, May 8, 1939
HOTEL MARKHAM

8:00 a. m.—Registration.—Lobby

CRYSTAL BALL ROOM

9:00 a. m.—Call to order by the president, Dr. H. Lowry Rush, Meridian.

Invocation
Roll Call
Reading of minutes of the last meeting
President's Address
Report of Board of Directors
Report of Secretary
Report of Treasurer
Report of Hospital Service Corporation of Mississippi
Announcement and Appointments of Committees
Introduction of Guests
Unfinished Business

Report of Committees—Each to be followed by round table discussion.

1. Constitution and Rules—Dr. J. Rice Williams, Houston Hospital, Houston, chairman.

Discussion: Dr. W. H. Frizell, King's Daughters Hospital, Brookhaven, vice-chairman; Dr. T. M. Dye, Clarksdale Hospital, Clarksdale.

2. Legislation—Dr. Lawrence W. Long, Jackson, chairman.

Discussion: Dr. V. B. Philpot, Houston Hospital, Houston, vice-chairman; Dr. R. B. Caldwell, Baldwyn Hospital, Baldwyn; Dr. R. J. Field, Field Memorial Hospital, Centerville; Dr. E. R. Nobles, Rosedale; Mr. C. F. Theobold, Biloxi Hospital, Biloxi.

3. Membership—Dr. W. H. Brandon, Clarksdale, Chairman.

Discussion: Dr. G. E. Adkins, Jackson Infirmary, Jackson, vice-chairman; Dr. E. C. Parker, Gulfport.

4. Charity Hospitals—Dr. E. H. Jones, Vicksburg, chairman.

Discussion—Dr. G. Lamar Arrington, Meridian, vice-chairman; Dr. Louis M. Magee, Natchez Charity Hospital, Natchez; Mr. Thomas A. Rhoden, Columbia.

5. Mental Hospitals—Dr. C. H. Mitchell, Mississippi State Hospital, Whitfield, chairman.

Discussion—Dr. J. S. Hickman, East Mississippi State Hospital, Meridian, vice-chairman; Dr. R. L. Rhymes, Merdian.

6. Public and Community Relations— Dr. Henry Boswell, Sanatorium, chairman.

Discussion—Dr. Felix J. Underwood, Jackson, vice-chairman; Dr. R. M. Flynt, Newton Infirmary, Newton; Dr. H. N. Mayes, Mayes Hospital, New Albany; Dr. B. B. Martin, Vicksburg Infirmary, Vicksburg.

7. Minimum Standards—Dr. John C. Culley, Oxford Hospital, Oxford, chairman.

Discussion—Dr. W. W. Crawford, South Mississippi Infirmary, Hattiesburg, vice-chairman; Mrs. Karenza Gilfoy, Mississippi Baptist Hospital, Jackson: Dr. A. B. Harvey, Tylertown Hospital, Tylertown; Dr. J. W. Primrose, Clarksdale; Miss Mary H. Trigg, R. N., Greenwood-Leflore Hospital, Greenwood.

8. Nurses and Nursing—Mrs. Sam Owens, R. N., George C. Hixon Memorial Hospital, Electric Mills, chairman.

Discussion—Miss Mary E. Dorsey, R. N.,

King's Daughters Hospital, Greenville, vice-chairman; Dr. S. E. Field, Field Memorial Hospital, Centerville; Dr. W. C. Pool, Cary.

9. Publication— Dr. Leon S. Lippincott, Vicksburg Sanitarium, Vicksburg, chairman.

Discussion—Dr. A. M. McCarthy, George C. Hixon Memorial Hospital, Electric Mills, vice-chairman; Dr. J. M. Acker, Aberdeen Hospital, Aberdeen.

10. Hospital Taxation—Dr. B. B. Martin, Jr., Vicksburg Infirmary, Vicksburg, chairman.

Discussion—Dr. C. H. Harrison, Philadelphia, Philadelphia Hospital, Philadelphia, vice-chairman; Dr. P. R. Hill, Corinth; Dr. William P. Warfield, Clarksdale; Dr. Thomas Wolford, Columbus Hospital, Columbus.

11. National Hospital Day—Mrs. Leon S. Lippincott, Vicksburg, vice-chairman.

Discussion—Dr. I. P. Carr, Clarksdale; Dr. F. S. Hill, Grenada General Hospital, Grenada; Dr. F. P. Ivy, Ivy Hospital, West Point; Dr. R. B. Yates, Victoria Butler Colored Hospital, Greenwood; Dr. Edward H. Crawford, Walthal Hospital, Tylertown.

12. Hospital Records—Miss Ethel Waldrop, Houston Hospital, Houston.

Discussion—Dr. J. E. Powell, Charleston; Miss Julia Scout, R. N., Rosedale Bolivar County Hospital, Rosedale; Dr. W. H. Sutherland, Northeast Mississippi Hospital, Booneville.

13. Hospital Accounting—Mrs. J. Oridge, R. N., Holmes County Community Hospital, Lexington, vice-chairman.

Discussion—Dr. W. W. Hall, Shelby; Dr. G. G. Townsend, Scott County Hospital, Morton.

14. Hospital Staff Rules and Regulations —Miss Helen Branham, R. N., Northeast Mississippi Community Hospital, Tupelo, chairman.

Discussion—Dr. J. P. Wall, Jackson, vice-chairman; Dr. J. L. Levy, Clarksdale; Dr. L. B. McCarty, Jackson; Dr. L. B. Morris, Macon Hospital, Macon.

15. Approved Merchandising—Dr. J. K. Kent, Grenada Hospital, Grenada, chairman.

Discussion—Dr. L. W. Brock, McComb Infirmary, McComb, vice-chairman; Mr. Ashton Toomer, Houston; Mr. B. T. Whitfield, Corinth Hospital, Corinth.

16. Child Health Day—Dr. W. H. Anderson, Booneville, chairman.

Discussion—Dr. Gladys Ratcliffe, McComb City Hospital, McComb, vice-chairman; Dr. T G. Hughes, Clarksdale; Dr. D. B. Stevenson, City Hospital, Lumberton; Miss W. B. Rankin, R. N., Columbia.

Monday afternoon, May 8, 1939—2:00 p. m.
CRYSTAL BALL ROOM—HOTEL MARKHAM
Dr. Lowry H. Rush, president, presiding.

IMPROVING HOSPITAL SERVICE IN MISSISSIPPI

SPEAKERS

Oswald N. Anderson, M. D., of the staff of the Council on Medical Education and Hospitals of the American Medical Association, Chicago.

Malcolm T. Mac Eachern, M. D., associate director, American College of Surgeons, and president, International Hospital Association, Chicago.

Bert W. Caldwell, M. D., executive secretary American Hospital Association, Chicago.

GENERAL DISCUSSION

Monday Evening, May 8, 1939
CRYSTAL BALL ROOM—HOTEL MARKHAM
Dinner Dance

Toastmaster—Dr. J. P. Wall, Jackson

Address—Speaking of Hospitals—That Reminds Me—Camille Estornelle, Ph.D., Vicksburg

Presentation of Certificates of Compliance with the Minimum Standards of the Mississippi State Hospital Association—Dr. John C. Culley, chairman, Committee on Minimum Standards, Oxford.

Presentation of Officers for 1939-1940—Dr. Joe E. Green, president, Mississippi State Medical Association, Laurel.

RESOLUTIONS

WHEREAS, the Mississippi State Hospital Association did enjoy the fellowship, cooperation, the privilege, and the benefits of meeting in conjunction with the Mssissippi Medical Assocation, and

WHEREAS, it is the belief of this Association that such meetings are mutually valuable in solving many problems, which, especially in Mississippi, are common to hospitals and the practice of medicine;

Be it, therefore,

RESOLVED, that the Mississippi State Hospital Association does hereby extend to the Mississippi State Medical Association its thanks and apprecation for the courtesies of this valuable contract and pledges to the Mississippi State Medical Association its continued loyalty and best efforts to improve the hospitals of the state, always keeping in mind the best interests of the patient, the doctor and the nurse.

J. Rice Williams
J. P. Wall
L. W. Long, committee

Unanimously adopted, April 18, 1938.

MISSISSIPPI STATE BOARD OF HEALTH

Mississippi's record of consolidation among vital statistics registrars has attracted widespread attention and was the subject of discussion at the Regional Conference of Registration Officials convening in Little Rock, Ark., March 28-29.

Mississippi was the first state to abolish the old unwieldy system of numerous local registrars, and as a result, has increased the accuracy and promptness of registration. Other states are becoming greatly interested in having only one registrar in each county. Kentucky has followed suit with eighty or ninety counties, and a great deal of consolidation is going on in Tennessee and other states.

Attending he Regional Conference were Dr. R. N. Whitfield, Director of Vital Statistics, Mr. Z. E. Oswalt, field representative of the department, Mrs. Adele Jones, chief clerk, and Mrs. W. B. Purser, secretary.

A check-up of birth registration in Mississippi is now being carried on by a representative of the Bureau of Census, Mr. W. H. Lackey of Washington, D. C. Names of approximately 10,000 births occurring in 1938 have been secured as samples on which the check is made.

Hundreds of births occurring last year are showing up as not registered, and their records are missing in the Division of Vital Statistcs. Due to the importance of birth registration in legal matters and for new developments in Social Security, physicians are urged to render their patients this valuable service. "On the whole, physicians of Mississippi are co-operating well in reporting births, but the carelessness of even a few will lower the state's record and make legal procedure and Social Security benefits for their patients difficult, if not impossible in later years," Dr. Whitfield says.

Present figures indicate that close to 95 per cent white and more than 90 per cent of the colored births last year were registered. These figures will be sufficient for Mississippi to retain membership in the U. S. Registration Area for Births, Dr. Whitfield states.

Arrangements have been made whereby students at the State Hygienic Laboratory who complete a year's work in parasitology, bacteriology, and serology are given an additional month's training in clinical technique at the Baptist Hospital in Jackson. This additional training qualifies them to hold a position in either public health or hospital laboratory.

A three weeks' malaria school for laboratory technicians will be held at the State Hygienic Laboratory from April 17 to May 6, conducted by Miss Aimee Wilcox, Senior Technologist, U. S. Public Health Service, Washington, D. C. First week of instruction will be for students and technicians of the State Hygienic Laboratory, while the two weeks beginning April 24 will be open to technicians from hospitals and clinics throughout the state who may wish to attend. No charge will be made for this course.

Any technician attending will be expected to bring a microscope, a microscope lamp, and laboratory uniforms. Latest techniques for preparing slides for malaria examination and latest methods in staining and examining blood specimens for malaria will be taught. There will be lantern slide demonstrations and a required study of two texts which will be furnished students. Lectures on malaria and also on mosquitoes will be given and a practical, written examination will be held at the end of the course.

Recently employed for a period of observation and training with the State Board of Health are Dr. Edwin M. Butler, formerly of Centreville, and Dr. J. H. White, formerly of Wewoka, Oklahoma. Doctor Butler received his B. S. degree from the University of Mississippi, his M. D. at Emory, and interned at Georgia Baptist Hospital in Atlanta. He then practiced in Centreville, serving as Wilkinson County Health Officer for two years.

Doctor White is associated with Dr. C. R. Gillespie, director of the Sunflower County Health Department, Indianola. After receiving his B. S. and M. D. degrees at Oklahoma University, Dr. White interned at St. Paul's Hospital, Vancouver, B. C., following which he did general practice in Wewoka, Oklahoma.

Mr. Grover C. Reid, Sanitation Supervisor of Gibson County, Tennessee, is studying the sanitation program in Mississippi during the week of April 3-12. Mr. Reid will see sanitation projects in Jones and Lauderdale Counties during his visit.

Dr. D. V. Galloway, supervisor of Venereal Disease Control, is spending the month of April in Baltimore, Maryland, where he is studying the city health department's venereal disease program. Enroute, Dr. Galloway attended a two-day symposium on syphilis at Durham, North Carolina, called by Duke University.

Passage of the LaFollette-Bulwinkle Bill by Congress during March increased the national appropriation for venereal disease control from $3,000,000 to $5,000,000. Mississippi will restate received $54,000 for this work and in coceive $90,000 from these funds for the year beginning July 1. During the past year the operation with the medical profession carried on venereal control programs in twenty-six counties.

The increased appropriation will permit the extension of the program into other counties on a matching basis, making a total of about 45 to 46 which can be supported during 1939-1940.

"We will not be able to provide adequate treatment for all who need it and cannot afford it, but the drugs will be supplied to all physicians who request them for indigent patients, and gradually we hope to extend the syphilis clinics," Dr. Underwood said. "During the next year, the program will be extended on a county-co-operating basis into those areas having the greatest syphilis problem, as this procedure reacts most quickly to the benefit of the entire state."

On February 3, Dr. Underwood addressed students at Millsaps College on "The Part the College Student Can Play in Health Education." Advising periodic physical examination as one proof of personal health education, Dr. Underwood recommended the regulation of diet, rest, and health habits as a means to health. He outlined public health problems dependent on community control, and pointed to quackery in the state as an indication of the need for health education. Calling the student body future leaders in the state, Dr. Underwood appealed to them "to help fight ignorance, superstition, quackery, death and disease."

New director of the Amite County Health Department is Dr. J. A. Sproles, Jr., formerly of Jackson. For three months prior to his appointment, Dr. Sproles served as assistant and relief health officer in Lee and Tallahatchie Counties.

Dr. J. W. Dugger, director of Industrial Hygiene, is serving as acting director of the new health district composed of Perry, Greene, George and Stone Counties, which started functioning March 1.

On March 14, Dr. Underwood attended a meeting of the Planning Committee of Children in a Democracy, Washington, D. C. This committee laid the groundwork for the White House Conference on Child Health, which will meet April 26, and of which Dr. Underwood is also a member. At that time a nation-wide study will be made of need, and means to improve child health.

A total of $10,229.95 to fight infantile paralysis was raised in eighty-one Mississippi counties as a result of President's Birthday Balls in the state. This is the largest amount raised since the initiation of these balls and does not include funds from one county which has not yet reported, and proceeds from the "March of Dimes." Whereas last year 100 per cent of the money raised went to the National Foundation. Dr. Underwood, state chairman, states that half of this year's funds will remain in the state for local use in the paralysis program.

On March 6, Dr. J. R. Heller of the Division of Venereal Disease, U. S. Public Health Service, Washington, visited the State Board of Health, conferring with Dr. D. V. Galloway, supervisor of Venereal Disease Control, Dr. A. L. Gray, director of Preventable Disease Control, and Dr. J. A. Milne, director of County Health Work.

Health education by its very name depends on the efforts of workers in the fields of both health and education, Dr. Underwood said to superintendents and principals of the Mississippi Education Association on March 22. In a talk entitled "Health and Public Education," Dr. Underwood appealed to school administrators for sanitary school environment including sanitary disposal of body wastes; safe water supplies, drinking devices, and hand-washing facilities; proper lighting, ventilaton, and heating.

He named teacher training in health education as the biggest administrative problem for departments of education and health to solve. "If children are to learn and live health at school, obviously they must have teachers expert in teaching health, which in turn entails special teacher training in the basic sciences and educaton," he said.

As one of the seven members of the Board of Scientific Directors of the Rockefeller Foundation, which controls the activities of the Foundation throughout the world, Dr. Underwood attended the meeting of this group in New York City, March 24.

On March 28, Dr. Underwood attended the annual meeting of the Greenville Chamber of Commerce.

Dr. T. Paul Haney, Jr., director of the Pike County Health Department, McComb, told of the obstetrical nursing service furnished physicians of Pike County at the Staff Conference on March 11. Dr. D. V. Galloway, supervisor of Venereal Disease Control, also appeared on the program, outlining Lauderdale County's loan service to physicians in the way of closet supplies. The conference was in charge of Dr. J. A. Milne, acting director of Maternal and Child Care.

Public health appraisals are being made by Commonwealth Fund officials in three Mississippi counties where the Fund is carrying on demonstration programs: Lauderdale, Pike, and Jones.

Working on the appraisals are Dr. W. Frank Walker, New York, director of the Health Studies Division of the Fund; Dr. H. E. Handley, Assistant Director of Public Health, Miss Carolina Randolph, Doctor Walker's secretary, and Miss Erminie Cross. Miss Randolph and Dr. Walker are co-authors of a book, "Recording of Local Health Work," on public health practice.

Broadcasts by the State Board of Health at 9:30 each Saturday morning over WJDX were as follows during March:

March 4—Miss Gladys Eyrich, supervisor, Mouth Health, State Board of Health, Jackson —"Pyorrhea."

March 11—Dr. Felix J. Underwood, Executive Officer, State Board of Health, Jackson, "Protecting Your Heart."

March 18—Dr. C. R. Gillespie, director Sunflower County Health Department, Indianola—"Maternal and Child Care."

March 25—Dr. J. W. Dugger, director, Industrial Hygiene and Factory Inspection, State Board of Health, Jackson—"The Control of Cancer."

Felix J. Underwood,
Executive Officer

Jackson,
April 5, 1939.

DIRECTORY AND CALENDAR OF MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet; also the names of the

MISSISSIPPI STATE MEDICAL ASSOCIATION: Seventy-Second Annual Session and Thirty-Sixth Annual Session of the House of Delegates, Gulfport, May 9, 10, 11, 1939.

Adams County Medical Society: James C. Rice, Natchez, president; Fred Geisenberger, Natchez, secretary. Meets third Tuesday, each month, Natchez, 7:30 p. m.

Amite County Medical Society: W. S. Stewart, Oskya, president; D. H. Thornhill, Crosby, secretary. Meets second Thursday, each month with Wilkinson County Medical Society, Field Memorial Hospital, Centreville.

Central Medical Society: J. T. Rainer, Yazoo City, president; Lawrence W. Long, Jackson, secretary. Meets first Tuesday, each month, Robert E. Lee Hotel Roof, Jackson, 7:00 p. m., except July and August.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. D. House, Sledge, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 p. m.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Coahoma County Medical Society: William P. Warfield, Clarksdale, president; N. C. Knight Clarksdale, secretary. Meets second Wednesday each month, Alcazar Hotel, Clarksdale. 12 noon.

Coast Counties Medical Society: F. O Schmide, Ocean Springs, president; D. L. Hollis, Biloxi, secretary.

Delta Medical Society: G. Y. Gillespie, Greenwood, president; F. M. Acree, Greenville, secretary. Meets second Wednesday, April and October, 2:00 p. m. Rotates through five counties.

Desoto County Medical Society: Henry M. Wadsworth, Hernando, president; L. L. Minor, Rt. 4, Memphis, Tenn., secretary. Meets first Monday, January, April, July and October.

East Mississippi Medical Society: R. M. Flynt, Newton, president; Guy T. Vise, Meridian, secretary.

Franklin County Medical Society: C. A. Everett, Bude, president; L. Costley, Meadville, secretary.

Homochitto Valley Medical Society: Harrison Butler, Liberty, president; H. A. Whittington, Natchez, secretary. Meets January, April, July and October, 2 p. m.

Issaquena-Sharkey-Warren Counties Medical Society: Dr. Walter E. Johnston, Vicksburg, president; Dr. Alston Callahan, Vicksburg secretary.

Marshall County Medical Society: C. R. Senter, Byhalia, president, Herbert Phillips, Holly Springs, secretary. Meets second Thursday each month, alternating between Byhalia and Holly Springs.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Newton County Medical Society: V. L. Henton, Decatur, president; Dudley Stennis, Newton, secretary.

North Mississippi Medical Society: C. M.

Speck, New Albany, president; S. E. Eason, New Albany, vice-president; A. H. Little, Oxford, secretary. Meets third Wednesdays of January, April, July and October, unless otherwise designated. Place of meeting: Varies.

Northeast Mississippi Thirteen-County Medical Society: Dr. R. J. Brown, Iuka, president; A. J. Stacy, Tupelo, secretary. Meets second Tuesday, March, June, September, December.

Pike County Medical Society: E. M. Givens, McComb, president; T. Paul Haney, Jr., McComb, secretary. Meets first Thursday, each month, McComb, 6:30 p. m.

Pontotoc County Medical Society: J. H. Windham, Ecru, president; Eliam B. Burns, Ecru, secretary. Meets first Tuesday each month, Pontotoc.

South Mississippi Medical Society: J. P. Culpepper, Hattiesburg, president; Carlton Temple, Hattiesburg, secretary.

Sunflower County Medical Society: U. S. Wasson, Moorhead, president; H. B. Cottrell, Indianola, secretary.

Tallahatchie County Medical Society: G. Lacy Biles, Sumner, president; G. D. Hightower, Webb, vice president; J. E. Powell, Charleston, secretary.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday, each month, Senatobia.

Tri-County Medical Society: (Copiah-Lawrence-Lincoln-Walthal), R. S. Savage, Brookhaven, president; R. B. Zeller, Hazlehurst, secretary. Meetings for 1930: Wesson, March 14th, 12:15 p. m.; Tylertown, June 13th, 12:15 p. m.; Monticello, Sept. 12th, 12:15 p. m.; Brookhaven, Dec. 12th, 12:15 p. m.

Webster County Medical Society: E. F. Arnold, Bellefontaine, president H. K. Curry, Eupora, secretary.

Wilkinson County Medical Society: C. L. Catchings, Woodville, president; E. M. Butler, Centreville, secretary. Meets second Thursday, each month, with Amite County Medical Society, Centreville.

Winona District Medical Society: T. J. Brown, Grenada, president; S. B. Caruthers, Grenada, secretary.

ADAMS COUNTY MEDICAL SOCIETY

The following is a brief report of the activities of our society for the past year.

Our programs have consisted of papers read by both visiting and local physicians. Many motion pictures were shown consisting of reels of such subjects as blood transfusions, breech extractions, rhinoplasty, impotence, modified Miculicz operations, and some scenes from our garden pilgrimages.

The Woman's Auxiliary of the Society fed us royally on March 15, at the beautiful home of Dr. and Mrs. H. M. Smith, the occasion being "Doctor's Day."

The Society ,through the aid of the health department, maintains a syphilis clinic giving aid twice weekly to the indigent. The local physicians administer all medications.

Mr. Ashcraft of the F. S. A. met with the society to discuss medical aid to clients of the resettlement movement, the result being that the society takes care of those people and receives payment monthly from the medical fund of the F. S. A.

Drs. Van Studdiford and DeLaureal, both of Tulane, gave a series of interesting and instructive lectures on syphilis and its treatment.

Fred Geisenberger,
Secretary.

Natchez,
April 4, 1939.

DELTA MEDICAL SOCIETY

The following is a brief report of the Delta Medical Society activities:

A semi-annual meeting was held on October 13, 1939, at Indianola, at which meeting the officers of the year were elected. Attendance was approximately 85. On April 12, meeting was held in Greenville. Attendance was approximately 100. Dr. O. W. Hyman, Dean of the School of Medicine at University of Tennessee, gave a very interesting talk on "What the Present Trend Towards Socialized Medicine is Going to Do to the Practitioner." The text of his paper will be published in an early issue of the MISSISSIPPI DOCTOR.

The membership for 1939 shows an increase, 93% of the members having paid. The society consists of approximately 126 doctors.

Officers for the year are: President, G. Y. Gillespie, Greenwood; president-elect, B. H. Higdon, Sunflower; vice-presidents: W. W. Hall, Shelby; T. J. Barkley, Belzoni; J. C. Adams, Greenwood; U. S. Wasson, Moorhead; J. G. Archer, Greenville; secretary and treasurer, F. M. Acree, Greenville.

Deaths during the year: S. L. Brister, Greenwood; T. C. Kelly, Sidon.

New doctors: E. T. Ellison, Greenville; B. H. Hand, Greenville.

Transfers to other towns: J. A. Spencer from Greenville to Jackson.

G. W. Peterson from Greenville to Measha, Wisconsin.

F. M. Holloman from Morgan City to Thornton.

W. H. McCrackin from Alligator to ? ? ?

J. S. McNeal from Moorhead to Mantee.

F. M. Acree, Secretary.

Greenville,
April 15, 1939.

DELTA MEDICAL SOCIETY

The Thirty-Third Semi-Annual meeting of the Delta Medical Society was held at the Hotel Greenville, beginning at 2:00 p. m., April 12. The program as announced by the secretary, Dr. F. M. Acree, was as follows:

Call to Order

Invocation—Dr. F. E. Smith

Announcements

SCIENTIFIC SESSION:

"Cardiac Pain in General Practice."—Ira B. Bright, M. D., Greenwood.

Discussion opened by G. Y. Gillespie, M. D.

"Sulfanilamide—Its Use in General Practice"—Joe E. Peeler, M.D., Shaw.

Discussion opened by O. E. Ringold, M. D.

"Diabetes in Rural Practice"—O. P. Myers, M. D., Indianola.

Discussion opened by J. D. Russell, M. D.

"Allergy"—J. R. Jackson, M. D., Belzoni.

Discussion opened by J. W. Jackson, M. D.

"Cancer of the Colon"—E T. White, M. D., Greenville.

Discussion opened by H. A. Gamble, M. D.

GUEST SPEAKERS

"What the Present Trend towards Socialized Medicine Is Going to Do to the General Practitioner"—O. W. Hyman, M. D., Dean, University of Tennessee, School of Medicine, Memphis, Tenn.

Business session

Social session—7:30 p. m.

Greenville,
March 26, 1939.

DESOTO COUNTY MEDICAL SOCIETY

The society met in regular order Monday, April 3, in the office of president Henry M. Wadsworth. The topic for discussion was the reports of strange or odd cases: Among those who spoke on the subject were Drs. A. L. Emerson, J. W. Evans, Jr., L. L. Minor, H. M. Wadsworth and J. M. Wright. Dr. J. W. Evans, director of the county health department, had an interesting report of his work.

There are eleven doctors practicing in the county, ten are members of the society, which gives us a percentage of 91.

L. L. Minor, secretary.

Rt. 4, Memphis,
April 7, 1939.

EAST MISSISSIPPI MEDICAL SOCIETY

During the past year the East Mississippi Medical Society received lectures on syphilology by Dr. Van Studdiford of New Orleans, Louisiana. We had three meetings at which programs were rendered and another meeting in December for the election of officers.

Dr. R. M. Flynt of Newton was elected president, and Dr. Guy T. Vise of Meridian was elected secretary-treasurer. The past officers were Dr. C. H. Harrison of Philadelphia, president, and Dr. Bob A. Cameron of Meridian, secretary-treasurer.

We are hoping to stimulate more interest this year and have a larger attendance at our meetings.

Guy T. Vise,
secretary-treasurer.

ISSAQUENA-SHARKEY-WARREN-COUNTY MEDICAL SOCIETY

Inaugurating a new series of "Home Talent" programs in our original work conclusions by the members of our own Society, the Issaquena-Sharkey-Warren-County Medical Society got off to a fine start this year at the business meeting.

The first meeting of the year is always devoted to a consideration of its affairs and Dr. Felix Underwood obliged the society during that month with an excellent discussion of the present status of the controversy between the medical profession and the United States Government.

At the meeting in February Dr. Laurance Clark gave some original contributions on the present status of vitamin therapy, mentioning the beneficial effect of nicotinic acid. Dr. John Dent presented a case of hyperinsulinism, which diagnosis was arrived at after prolonged study.

In March, Dr. G. W. Gaines presented some original work with the use of kerosene as an enema as a treatment for amebic dysentery and Dr. Henry Goodman reported two cases of contraction of Bandl's ring which had been handled very satisfactorily.

In April, Dr. J. L. Hall talked on pre-cancerous and cancerous lesions of the skin. This paper was hotly discussed by the members of the society and Dr. Preston Herring, who has just returned from a three months' period of study in the postgraduate school of medicine, talked on medical shock. This paper was also well discussed.

The society feels that it is doing an important work in the education of the public with its weekly radio talks by members of the society. Each member is taken alphabetically and in rotation and speaks on some subject which is of interest to laymen. Dr. F. M. Smith, county health officer, has been serving excellently as chairman of the radio committee.

Alston Callahan,
secretary.

Vicksburg,
April 12, 1939.

QUARTERLY MEETING OF THE NORTH MISSISSIPPI MEDICAL SOCIETY

University, Mississippi, April 19, 1939
2:00 p. m.
Graduate School Auditorium

Program

1. Reading of Minutes and other Business.
2. "Tuberculosis of the Genito-urinary Tract" —Dr. Temple Ainsworth—Jackson.
3. "Remarks on Croup" — Dr. Van Dyke Hagaman—Jackson.
4. "Further Observation on the Treatment of Intracranial Hemorrhage"—Dr. Toxie Hall —Jackson.
5. "Acute Sinusitis"—Dr. Lauch Hughes—Jackson. .
6. "Treatment of Pneumonia"—Dr. Lee Lipscomb—Jackson.
7. "Indications and Contra-Indications for Podalic Version"—Dr. L. B. McCarty—Jackson.
8. "Hematology and Serology in Pregnancy" —Dr. Bill Noblin—Jackson.
9. "Case Reports: Hydrops Universalis Infantalis. Ectopic Pregnancy" — Dr. Carter O'Ferrall—Jackson.
10. "Remarks on Typhus Fever"—Dr. George Riley—Jackson.
11. Remarks on Metrazol Therapy"—Dr. W. L. Waldron—Jackson.
12. "Treatment with Male Hormone"— Dr. Brister Ware—Jackson.
13. "Pyelitis in Children"—Dr. Charles E. Ward—Jackson.
14. "The First Few Days in the Clinical Course of Coronary Thrombosis"—Dr. T. E. Wilson—Jackson.

C. M. Speck, president
New Albany

A. H. Little, secretary
Oxford

April 16, 1939.

COAST COUNTIES MEDICAL SOCIETY

Arrangements have been completed for the entertainment of the State Medical Association during its meeting from May 9 to May 11 at Gulfport. There will be a floor show, a seafood barbecue, and the usual boat ride on the Gulf. Dr. C. A. McWilliams, in charge of the entertainment, has left nothing undone to provide amusement for those who attend this meeting, so we hope that all the members of our association who can possibly come will do so. Those who like and enjoy sports may bring their fishing tackle and golf bags.

The members of the Coast Counties Medical Society will do everything possible to provide for the pleasure and the hospitality of our members. The meeting will be held at the Markham Hotel which will be our headquarters, and we will use the hotel's air-conditioned auditorium.

At the regular meeting of the Coast Counties Medical Society on April 5, Dr. W. C. Hannon, of Mobile, gave a most interesting essay on "Chronic Osteomyelitis in Children." Dr. Hannon presented numerous x-ray studies of several cases and showed a picture of the necessary surgical procedures used by him in osteomyelitis. He spoke of the large number of cases of osteomyelitis, and of the necessary care and attention that these cases require. This excellent essay by Dr. Hannon was greatly appreciated by our society.

The medical profession on the Coast is looking forward to the coming of the State Medical Association and hopes that we shall have the pleasure and privilege of having all of you with us on the Coast where a good time and a good program awaits you.

D. L. Hollis, Secretary.

Biloxi,
April 6, 1939.

DESOTO COUNTY

This county now has a full time health department. The director is Dr. John Wilson Evans, Jr. Dr. Evans is a native of Tennessee and is an alumnus of the University of Tennessee, getting his degree on March 22, 1937. He served an internship in a hospital in Tulsa, Okla., was connected with the Pike County Health Department until January 1, 1939. The nurses are Miss Sybil Freeman of Tunica and Miss Turner Nevin of Sidon; Miss Christine Denham of Hernando, does secretarial work; Mr. Herbert Moore, sanitation, etc. Everything seems to be harmonious; the personnel have been courteous and helpful and their work has been up to the standard.

Miss Jane Redmond, formerly connected with the work here, has assumed duties of considerable importance with the Crippled Children's Hospital, Memphis. While she deserved promotion, we regretted to see her leave.

Several of our doctors have been sick with the ubiquitous flu. Dr. A. V. Richmond of Lake Cormorant was seriously ill for several days but he has resumed his practice. All the rest of us are also on the job regularly.

The earliest medical schools of record were at Cyrene in Northeastern Africa, Crotana (a Greek town in what is modern Calabria), Cnidus in Asia Minor, and Cos on the island of the same name at the mouth of the Gulf of Halicarnassus.

From the medical school at Cos arose the man who first placed medicine upon a scientific basis, Hippocrates.

The first American to graduate in medicine in Europe was John Moultre of South Carolina, 1749.

The first medical diploma to be awarded after a course of study in America was that given to John Archer at the University of Pennsylvania. 1768.

"These gentlemen," said Dr. Oliver Wendell Holmes in a lecture referring to the lower portion of the pelvic bone, "are the tuberosities of the ischia, on which man is designed to sit and survey the works of creation." Another has said that under the pelvic arch each member of creation has passed.

The society has accepted the kind invitation of Dr. Angus L. Emerson to be his guest at a supper Monday, July 3, 7 p. m.

This will be "experience night. Each doctor will relate instances where they arrived just in time to save a patient's life or per contra, had gotten there just too late; also other peculiar circumstances in their practice.

We note that Dr. W. H. Anderson of Booneville, editor of the MISSISSIPPI DOCTOR, is now councilor of the Southern Medical Association, having succeeded Dr. H. F. Garrison whose term had expired. Both are men of ability and hard workers in our association.

L. L. Minor,
County Editor.

Rt. 4, Memphis, Tenn.,
April 7, 1939.

LEFLORE COUNTY

Among the visitors to Greenwood during the month were Dr. A. C. Kimbriel, Drew; Dr. and Mrs. T. G. Hughes, Clarksdale; Drs. E. W Holmes and E O. McCain, Winona; Dr. H. O. Leonard, Coffeeville; Dr John W. Shackleford, State Board of Health, Oklahoma City.

Drs. Baskervill, Lucas and Yates attended the meeting of the Central Medical Society in Jackson.

Dr. W. E. Denham visited Jackson and Natchez.

Dr. M. B. Copeloff, Atlanta, Ga., came over to Itta Bena to see his father, March 8, and carried his father home with him for a visit.

Dr. and Mrs. W. B. Dickins and daughter, Marion, spent the week-end March 18 and 19 in Monticello, Ark., with Dr. and Mrs. R. D. Dickins.

Drs. J. F. Lucas and I. B. Bright attended the meeting of the Clarksdale and Six-County Medical Society at Clarksdale, March 22.

Mr. Robert Baskervill, Warrenton, North Carolina, a senior at Duke University, visited his uncle, Dr. George Baskervill on March 26, and on March 29 they drove to Alexandria, La., to visit relatives for a few days.

W. B.Dickins,
County Editor.

Greenwood,
March 31, 1939.

INTERPRETING MEDICAL LITERATURE

STAFF OF REVIEW

Eye, Ear, Nose and Throat—Alston Callahan, Vicksburg.

Obstetrics and Gynecology — J. W. Lucas, Greenwood.

Orthopedics—Thomas H. Blake, Jackson.

Pathology and Clinical Pathology — E. T. White, Greenville.

Pediatrics—Harvey F. Garrison, Jackson.

Public Health—Felix J. Underwood, Jackson.

Radiology and Roentgenology—Karl O. Stingily, Meridian.

Surgery—A Street, Vicksburg.

Urology—Temple Ainsworth, Jackson.

Discussion and comments are invited.

OBSTETRICS AND GYNECOLOGY

J. F. LUCAS
GREENWOOD

Treatment of Pruritis Vulvae by Alcohol Injections, William Wilson, J. A. M. A. 110:493, 1938.

This is a report of forty-nine cases of pruritis vulvae which had been treated unsuccessfully by various conservative measures, with an average duration of symptoms of over eight years. All of the forty-nine cases were treated by the subcutaneous injection of 95% alcohol. A small needle is used and is inserted perpendicularly through the skin and only two to four minims of alcohol is injected te each insertion.

The spacing of the injections and the number of injections required depends upon the extent of the pruritis, the age of the patient, and the condition of the peripheral circulation. In a young patient with good circulation four minims of alcohol may be injected beneath each square centimeter of the pruritic skin. The injections are very painful and general anesthesia is always required. Immediately after injection the labial folds become edematous, reaching a maximum in from twelve to twenty-four hours. The edema gradually subsides and in from three to ten days the vulva appears normal except for some induration. The intense itching stops at once, but if certain areas were overlooked or improperly injected the patient will not get complete relief and will have to be injected again.

Some patients will complain of pain until the edema has subsided, while others may be annoyed by the numbness which accompanies the nerve degeneration. Usually the patient is able to be up after twenty-four hours. Small hematomas developed in two patients and had to be incised.

25 patients (51%) obtained complete relief; four obtained partial relief while only two were complete failures. There were 13 (26%) recurrences, five of which had leucoplakic vulvitis.

COMMENT: The aggravating and demoralizing effects of vulval pruritis are well known. These unfortunate patients have tried everything that anyone has suggested and are usually willing to undergo any form of treatment to get relief. There have been several recent reports of smaller series in the literature with favorable results. Sloughing of tissue may sometimes occur and prolong the post-operative treatment. All of these cases get relief of symptoms. The ideal in treatment is to inject sufficient alcohol to relieve the symptoms but not enough to cause sloughing. It is important not to inject alcohol into the layers of the skin but beneath the skin.

April 10, 1939.

EYE, EAR, NOSE AND THROAT

ALSTON CALLAHAN
VICKSBURG

THE FUNDUS OCULI IN GENERALIZED HYPERTENSION AND ARTERIOSCLEROSIS: Robert Salus, Arch. Ophth. (March) 1939. Prague, Czechoslovakia

The changes in the retinal vessels have been studied with peculiar attention since the beginning of clinical ophthalmology, as the background of the eye is the only place in the body where small arteries and veins, precapillaries and even capillaries can be observed covered only by a crystal clear tissue, in their natural position and color and magnified. Because of these favorable circumstances, important conclusions as to the pathology of the circulatory apparatus were naturally expected from such examinations. The importance of such conclusions, however, has increased considerably, owing to the knowledge that an almost complete parallelism exists between the retinal vessels and the cerebral vessels and that, therefore, one has an undisputed right to draw conclusions as to the condition of the cerebral vessels on the basis of changes in the vessels of the fundus.

Diagnosis is easy only in the advanced stages; in the beginning stages the diagnostic value of the changes just mentioned is not uniform and not unconditional. It is, therefore, not advisable to commit oneself as to the diagnosis before certain variations have made their appearance. The diagnosis of arteriosclerosis is by no means justified by the existence of tortuous vessels or somewhat more accentuated reflexes; such alterations may be due to other causes and are frequently congenital.

The "crossing arch" is absolute proof of hypertension. It is missing only in a small number of cases of permanent hypertension, chiefly for anatomic reasons (either the larger vessels do not happen to cross or the vein lies above the artery at the crossing); it is much rarer in intermittent hypertension and appears chiefly in the cases in which the condition has a tendency to become permanent. The "crossing arch" is where an artery crosses a vein, the latter forming before and behind the crossing an arch, more or less large, and within the limits of this arch appearing somewhat attenuated or even totally or partially invisible.

Besides the crossing phenomenon, there is in the fundus still another group of changes from which one is able to infer the existence of general hypertension. To this group belongs the attenuation of the peripheral arteries, vessels that correspond to arterioles. Of other changes that belong in this class, the most important are the silver wire arteries, an infrequent symptom but characteristic and present only in the advanced stages. Another change is the tortuosity of the veins, especially of the finest visible venules.

COMMENT: It cannot be mentioned too many times that an examination of the eye grounds is as important as is making the blood pressure test. General practitioners, as a rule, do not use this form of study and it is to be hoped that the number of those that do will increase.

THE USE OF ESTROGENIC SUBSTANCES IN ATROPHIC RHINITIS: Irl H. Blaisdell, Laryngoscope (October) 1938.

Estrogenic substances have been used empirically in this condition with the hope that helpful results in the nose might be obtained. Estrin, the follicular hormone which can be obtained from the follicular liquid from man and various mammals, is also found in the placenta. When pregnancy occurs and the fertile ovum comes in contact with the maternal circulation massive production of estrin sets in acutely. The body rids itself of this excess by rapidly excreting it with the urine and the amount increases as pregnancy goes on. Many patients with atrophic rhinitis have shown considerable improvement for a time during their pregnancy. Indeed the advice of older practitioners who told their patients with atrophic rhinitis to get married may not have been amiss. Estrin likewise occurs in flowers, plants, etc. It is a well known fact that atrophic rhinitis usually begins about the age of puberty and lasts until the patient reaches about forty or fifty years of age, at which time it seems to get better spontaneously.

Estrin therapy in atrophic rhinitis has given clinical improvement of symptoms. Side-reactions and exacerbations do occur, but, in general, patients remain symptom-free as long as estrin is used. Biopsies should be taken before and after treatment, in order to determine the extent of the changes, if any, in the nasal mucosa. Determinations of estrin in the urine should be carried out before treatment, and periodically thereafter. The relationship between menstrual abnormalities and atrophic rhinitis should be undertaken by a gynecologist. The exact mechanism by which estrin acts upon the nose is not known, and the extent of changes in the mucosa, as well as the pregnancy of the improvement clinically, can be determined only after years of careful study of these cases.

COMMENT: We have used this in three cases and have felt that the use of estrogenic substances is an improvement over the treatment used heretofore.

April 12, 1939.

HOSPITAL STAFF TRANSACTIONS

CALENDAR OF HOSPITAL STAFF MEETINGS

MISSISSIPPI STATE HOSPITAL ASSOCIATION, Tenth Annual Session, Gulfport, May 8, 1939.

Aberdeen Hospital: Third Monday, each month, 7:00 p. m.

Anderson Infirmary: First Friday, each month, 6:30 p. m.

Biloxi Hospital: First Thursday, each month, 7:30 p. m.

Bramlett Hospital: Third Wednesday, each month, 7:30 p. m.

Clarksdale Hospital: Second Wednesday, each month, 12:00 noon.

Field Memorial Hospital: Second Thursday, each month, 6:30 p. m.

Gilmore Sanitarium: Third Thursday, each month, 8:00 p. m.

Greenwood-Leflore Hospital: First Thursday, each month 6:30 p. m.

Grenada Hospital: Second Tuesday, each month, 6:30 p. m.

George C. Hixon Memorial Hospital: First Monday, each month. 7:30 p. m.

Holmes County Community Hospital: Second Thursday, each month, 7:00 p. m.

Houston Hospital: Last Thursday, each month, 7:30 p. m.

Ivy Hospital: First Monday, each month, at 7:00 p. m.

Jackson County Hospital: Second Thursday, each month, except July and August, 7:00 p.m.

Jackson Infirmary: Last Tuesday, each month, except three summer months, 7:00 p.m.

King's Daughters Hospital, Brookhaven: First Tuesday, each month, 7:00 p. m.

King's Daughters Hospital, Greenville: First Wednesday, each month, 7:00 p. m.

King's Daughters Hospital, Gulfport: Third Thursday, each month, 8:00 p. m.

King's Daughters Hospital, Yazoo City: First Monday, each month, 7:30 p. m.

Macon Hospital: First Tuesday, each month, 7:30 p. m.

Magee General Hospital: Twenty-fifth each month, 7:30 p. m.

Mayes Hospital: First Monday, each month, 2:30 p. m.

McComb City Hospital: First Tuesday, each month, 6:00 p. m.

McComb Infirmary: Second Thursday, each month, 7:00 p. m.

Meridian Sanitarium: Second Thursday, each month, 6:30 p. m.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 p. m.

Mississippi State Hospital, Vicksburg: Third Tuesday, each month, 7:00 p. m.

Natchez Sanatorium: Second Tuesday, each month, 7:30 p. m.

New Albany Hospital and Clinic: Second Tuesday, each month, 8:00 p. m.

Newton Hospital: Second Thursday, each month.

Northeast Mississippi Hospital: First Monday, each month, 7:30 p. m.

Oktibbeha Hospital: Last Thursday, each month, 7:30 p. m.

Oxford Hospital: Last Monday, each month.

Pontotoc Clinic: First Tuesday, each month, 7:30 p. m.

Rush's Infirmary: First Friday, each month, 7:30 p. m.

Scott County Hospital: Third Wednesday, each month.

South Mississippi Infirmary: Last Thursday, each month, 5:00 p. m.

Tylertown Hospital: Second Thursday, each month, 7:00 p. m.

U. S. Veteran's Hospital, Gulfport: Every Monday, Tuesday, Wednesday, and Thursday, 10:45 a. m.

Vicksburg Hospital: Second Thursday, each month, 7:00 p. m.

Vicksburg Infirmary: First Wednesday, each month, 7:30 p. m.

GREENWOOD LEFLORE HOSPITAL

The regular meeting of the staff of the Greenwood Leflore Hospital was held at 6:30 p. m., Thursday, March 2. There were present 14 of our local doctors and also Dr. Claud Yates, Philadelphia, who was visiting his brother, Dr. R. B. Yates. After enjoying a nice supper of broiled chicken, etc., the meeting was called to order by Dr. J. P. Bates. The minutes of the last meeting, reading of reports and communications by the secretary, Dr. I. B. Bright, was the next order of business.

Reports of deaths occuring during the month were presented—a case of double pneumonia by Dr. I. B. Bright, and a case of whooping cough in a baby by Dr. S. L. Brister. Films of cataract operation and plastic surgery were then shown.

A postgraduate course in syphilology, consisting of four lectures, was given by Drs. B. J. DeLaureal and M. T. Van Studdiford at the hospital, March 13 to 16. The course was well attended by our own local doctors and nurses and by Drs. Charlton, Berclair; Gill, Sidon; Harper and Hightower, Itta Bena; Holman, Carrolton; Giles, Avalon; T. M. Riddell, swiftown, and M. E. Arrington, Vaiden. On March 14, Dr. H. E. Handley of New York City, assistant director, Medical Division of the Commonwealth Fund, was present and spent the night with his friend, Dr. R. E. Wilson. Dr. Paul R. Googe, Charleston, was here March 15, and Dr. Hanley left with him for a visit to Charleston.

Another interesting lecture was given at the hospital March 20, by Dr. D. K. Kitchen of Detroit, Michigan. His subject was "The Physiology and Clinical Application of Endocrines," and was enjoyed by physicians from this and adjoining counties.

W. B. Dickins.

Greenwood,
March 31, 1939.

IVY HOSPITAL STAFF MEETING

The regular meeting of the Ivy Hospital Staff convened on April 12, having been postponed on account of several emergency cases and because the physicians were out of the city.

The Ivy Hospital was undergoing a complete redecorating and painting inside and out, all furniture, and beds being re-painted.

A quorum was present. Dr. Lon W. Dotson was absent on account of an infected, abscessed tooth.

Cases reported were discussed and the use of sulfanilamide in urinary disorders was discussed.

The several uses of sulfanilamide in the treatment of pyelitis of pregnancy in three cases were discussed by Dr. J. E. Ellis.

A program was outlined and arranged for the next month's meeting.

Dr. George Campbelle,
Secretary.

West Point,
April 13, 1939.

VICKSBURG SANITARIUM

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Monday, April 10, and after a supper served at 6:30 p. m., was called to order by the vice-president, Dr. L. J. Clark, with 13 members of the staff present. The program included:

Reports from the Records Department and Analysis of the Work of the Hospital.

Report of Vital Statistics—Dr. F. Michael Smith, director, Warren County Health Department.

CANCER CLINIC FOR DISCUSSION

1. Adeno-carcinoma of Omentum (grade IV) —Dr. G. M. Street.
2. Adeno-carcinoma of Ileum, Cecum, Appendix and Ascending Colon (grade IV)—Dr. A. Street.
3. Adeno-carcinoma of Thyroid — Dr. A. Street.
4. Adeno-carcinoma of Sigmoid (grade II) —Dr. A. Street.
5. Adeno-carcinoma of Appendix and Krukenberg Tumor of Ovary, Bilateral—Dr. A. Street.
6. Carcinoma of Thyroid—Dr. J. A. Birchett, Jr.
3. Type III Pneumonia with Recovery—Dr. G. C. Jarratt.

DEMONSTRATION OF SELECTED ROENTGEN RAY STUDIES—Osteoplastic flap of skull; pulmonary tuberculosis; atelectasis of lung from foreign body; duodenal ulcer.

THREE-MINUTE REPORT OF THE LITERATURE OF THE MONTH:

1. Dr. G. M. Street—X-ray Therapy in Inflammatory Conditions.
2. Dr. L. S. Lippincott—Experiments to Determine Effects of X-Ray in Leukemia.
3. Dr. J. A. K. Birchett, Jr.—Resection of Presacral Plexus for Primary Dysmenorrhea.
4. Dr. S. W. Johnson—Use of Sulfanilamide in Treatment of Chancroid.

SPECIAL REPORTS:

The Recent Meeting of the American College of Physicians at New Orleans, La.—Dr. L. J. Clark.

The staff congratulated Dr. L. J. Clark on certification by the American Board of Internal Medicine.

The next meeting of the staff will be held Wednesday, May 10, 1939.

Abstract: Acute Appendicitis in Pregnancy

—J. A. K. Birchett, Jr. M. D.

Patient: White, female, age 32, house wife.

Present Complaint—Right-sided abdominal pain.

History of Present Complaint: Patient had been under observation of home physician for the past five months because of pregnancy. The first eight weeks of the pregnancy were associated with nausea and vomiting, but, under treatment, this state had subsided, and the patient was making normal progress. There had been some pus in the urine, thought to be caused by pyelitis associated with pregnancy, and for this condition, she had been taking medication from her home physician. For the past three weeks there had been several flare-ups of this so-called kidney infection; about two days ago, began to have some sense of discomfort in the abdomen, such as fullness and nausea and some generalized abdominal pain. As her attending physician had seen her with one or two mild attacks of appendicitis previous to the development of the pregnancy, he immediately was suspicious of this condition and confined her to bed and placed her on a liquid diet. This morning the pain became much more severe. The doctor was called and made a diagnosis of possible appendicitis, or a flare-up of the pyelitis, due to obstruction of the right ureter because of the weight of the uterus, and sent her to this clinic for treatment.

Past History: Usual childhood diseases; whooping cough, measles and mumps. No surgical procedures. General health good. Menstrual periods began at age of 13 and are regular and normal. No dysmenorrhea. In the past three or four years, has had several attacks of pain over the right kidney associated with pus in the urine, and diagnosed as pyelitis. She has had several attacks of abdominal pain, associated with nausea, and had been told that she had chronic appendicitis. No tuberculosis or cancer in the family.

Physical Examination: Well-developed and nourished. Temperature 99°F., pulse 82, blood pressure 118/80. Nose and throat, thyroid, heart and lungs, essentially negative. Abdomen distended, commensurate with pregnancy of five months. Fetal heart sounds could be discerned. Pain was elicited in the region of the umbilicus, radiating towards the right umbilical and inguinal regions. There was considerable tenderness over the crest of the ilium and up as far as the costovertebral angle over the right kidney. No marked rigidity. There was evidence of a positive peritoneal inflammation when the pressure and release technique was employed. The vaginal examination showed no excessive cervical drainage and negative smears from the cervix. A catheterized specimen of urine was cloudy, showed rare bacilli and many leukocytes; no albumin, no sugar, no casts. The blood count: erythrocytes, 3,440,000;total white count, 18,700; and differential count—small lymphocytes, 11%, large lymphocytes, 5%, and neutrophils 84%.

Procedure: The findings gave us the impression that we were dealing either with an acute pyelitis of pregnancy, associated with blockage of the right ureter, or with an acute appendiceal flare-up. A differential diagnosis was obtained by cystoscopy, which was done without difficulty. There was no retention of urine in the right renal pelvis and that which was obtained was apparently normal. Laboratory examination showed rare pus cells and later colon bacilli were isolated from this urine. However, the findings from the cystoscopy definitely proved to us that the cause of her pain and discomfort was not related to the kidney and that the appendix should be observed.

Operation: Four hours after admission, and after a preliminary hypodermic of morphine and hyoscine, under cyclopropane anesthesia, a McBurney incision was made. There was much milky peritoneal exudate. The appendix was found to be hanging over the brim of the pelvis about in the region of the right ureter, and the uterus was exerting considerable pressure upon it. A few adhesions were beginning to form between the appendix and the surface of the uterus. The appendix was gangrenous in its distal half and acutely inflamed towards the base of the cecum, which was also markedly injected. The appendix was easily worked free of its newly formed attachments, the meso ligated and the appendix removed. Diverting from our usual technique at this stage, the ligated stump was inverted to prevent any possible adhesions forming between the uterus and the unburied stump, and subsequent leakage because of mechanical pressure of the gravid uterus. Two Rehfuss tube drains were placed in the pelvis over the brim and behind the uterus, so as to prevent any puddling of infected exudate in this cavity. The wound was closed.

Subsequent: Convalescence was uneventful, except for several attacks of tympanites, which were relieved by the use of pitressin and colon tube. All pain was relieved by the use of morphine to prevent any contraction of the uterus with possible spontaneous loss of the uterine contents. Patient was kept in bed for 14 days, after which time a maternity binder was fitted and the patient was discharged in excellent condition.

Remarks: Munde was the first to describe, in 1894, the first case of appendicitis in pregnancy which was followed by a successful surgical recovery. Munde stated that there was no evidence that any earlier cases had been found. However, in 1897, Abroms reported fifteen cases and Boige, in 1901, found 70 cases. It seems that appendicitis occurs in pregnancy commonly in the early months, but rarely does it occur in the last two months of pregnancy. Probably acute appendicitis occurs no more frequently in the pregnant woman than it does in the nonpregnant woman, but it is a known fact that when there have been previous appendiceal attacks pregnancy is likely to cause reactivation, and in women who have appendiceal attacks, 70% of them will have a flare-up if they become pregnant. Felkner says that only one out of 3800 known cases of appendicitis escapes return of the trouble during her pregnancy. Over 80% of the cases of appendicitis associated with pregnancy occur in the first six months of pregnancy. One of the most striking facts relative to appendicitis associated with pregnancy is the terrific mortality. Shumacker states it is between 30% and 50%, and when peritonitis is present, it is 80%. Dworzak states that the mortality varies between 18% and 76%, and that the infant mortality approaches 100%. These shocking figures are due, of course, to the delay in recognition of appendicitis and the time lost before operation. The signs and symptoms of appendicitis during the first 4 months of pregnancy are usually the signs and symptoms of the average case of appendicitis, that is, right lower quadrant pain with tenderness, muscle spasm, nausea, vomiting, fever, and leukocytosis, but after the sixth month, other factors arise which may confuse the picture and retard the making of a diagnosis. In the last three months, constant pressure contraction of the uterus may occur as a result of appendicitis and be strong enough to stimulate the onset of labor. It is almost impossible to make a diagnosis of appendicitis after labor begins, and this particularly accounts for so few cases having been reported late in pregnancy.

The other deceptive factor is the pushing up of the abdominal viscera into the upper abdomen because of the pressure of the growing uterus. The appendix may be as high as the level of the gall bladder and the pain from an appendix in this region is difficult to differentiate from gall bladder disease, pleurisy, renal colic or duodenal lesion. Futh found an upper displacement of the cecum after the fourth month and Shumacker confirmed this statement by x-raying 70 women, which showed that the cecum was displaced as early as the second month. The attenuation and thinning out of abdominal muscles will prevent the development of muscle spasm. Therefore, any abdominal pain which is found during pregnancy must be suspected as appendicitis until proven otherwise. Pyelitis occurring on the right side, with obstruction of the right ureter due to the pressure of the gravid uterus, with retention of urine in the right renal pelvis, will also give symptoms which must be differentiated from a retrocecal appendix and, of course, ovarian and adnexial disease of a chronic nature which might have been activated by the breaking up of adhesions as the gravid uterus rise from the pelvis must be given consideration. A twisted ovarian pedicle and intestinal obstruction must also be taken into account as factors of abdominal pain during pregnancy.

The treatment is fundamentally surgical and probably if these cases are seen early, as in the average case of appendicitis, the results will be as uniformly good. It is best to operate through the McBurney incision, as the stretching of the lateral muscles of the abdomen, due to the pressure of the uterus, enables us to have a wide visual field, because of the size of the incision at this time, and it will facilitate drainage by keeping the drainage material well away from the abdominal structures. There is considerable controversy about what may occur following appendectomy and drainage of peritoneal abscesses. There is great danger of the uterus suddenly aborting and emptying itself with the rapid spread of the infection throughout the peritoneal cavity, as the rapidly retracting uterus will break down all adhesions or barriers. It is advocated by some that where there is a generalized peritonitis at the time of the operation the Porro operation is advisable, and it is best to remove the uterus with its contents and give free drainage to the infected peritoneum. It is thought by some, that in the presence of peritoneal infection, it is best to do a Caesarean section, so as to empty the uterus of its contents at the time of the operation. We must also remember that appendicitis may occur during the puerperium and that the afterpains may sometimes be pains due to appendiceal inflammation and, in this state of pregnancy, we must always be conscious that the appendix is liable to flare up at any time, especially if there has been a history of previous appendiceal attacks.

HONOR ROLL

The following have contributed to this number of the journal:

Joseph E. Green, J. P. Wall, Archibald C. Hewes, E. Leroy Wilkins, L. L. Minor, R. B. Caldwell, Lawrence W. Long, H. Lowry Rush, Felix J. Underwood, R. N. Whitfield, Fred Geisenberger, F. M. Acree, Guy T. Vise, Alston Callahan, A. H. Little, D. L. Hollis, W. B. Dickins, J. F. Lucas, Harvey F. Garrison, George Campbelle, J. A. K. Birchett, Jr.—21

WOMAN'S AUXILIARY
TO THE
MISSISSIPPI STATE MEDICAL ASS'N

This month brings two important conventions for Auxiliary members, and we hope many of you will attend both.

The Auxiliary at Gulfport has planned a very interesting and diversified program of entertainment. We are assured of much pleasure and Mrs. Howell and her chairmen have some interesting things on the "work" program.

Your Press and Publicity chairman hopes to see the largest number of members attending the convention to bring to the close a very successful year's work for our very efficient and energetic president, Mrs. John B. Howell.

The convention of the A. M. A. Auxiliary meets in St. Louis at the Hotel Chase May 15-19, the week following the Gulfport meeting. They, too, have prepared a most interesting program of business and entertainment.

The convention really begins on Sunday afternoon, May 14, with a tea honoring the president, Mrs. Charles C. Tomlinson, and the National Board.

An interesting feature on Wednesday afternoon will be the exhibits in the Empire Room, Hotel Chase, from the various state auxiliaries.

Our own exhibit has been prepared by Mrs. John Harter of Sanatorium and is very comprehensive of the Magnolia State Auxiliary.

SIXTEENTH ANNUAL SESSION, THE WOMAN'S AUXILIARY TO THE MISSISSIPPI STATE MEDICAL ASSOCIATION

PROGRAM

TUESDAY, MAY 9,—

12:30 a. m. Executive Board Meeting—Luncheon—Hotel Markham

2:30 a. m. Drive—Tea—Hostesses: Biloxi Ladies

WEDNESDAY, MAY 10—

8:00 a. m.—Past Presidents' Breakfast, Hotel Markham

9:00 a. m.—General Session

All women attending the Mississippi State Medical Association are cordially invited to attend.

Call to Order ....President

Invocation — Rev. J. N. Brown, Presbyterian Church, Gulfport

In Memoriam ....Mrs. V. B. Philpot, Houston

Music

Address of Welcome—Mrs. Dan J. Williams, Gulfport

Response to Address of Welcome—

Introduction of Honor Guests

Minutes of Preceding Meeting—Mrs. H. C. Ricks, Jackson, Miss.

Reports from A. M. A. and S. M. A.—

Presentation of Three New Projects Undertaken This Year—Mrs. W. H. Anderson, Booneville.

Reports of State Officers

Reports of Auxiliary Presidents

Committee Reports

Election of Officers

Introduction of New Officers

Announcements

New Business

Adjournment

* * * *

WEDNESDAY, MAY 10—

12:30 to 1:30 p. m.—Luncheon — Edgewater Gulf Hotel

1:40 p. m.—Post Convention Board Meeting

4:00 to 5:30 p. m.—Garden Party on Great Southern Hotel Lawn

6:00 p. m.—Fish Supper at Yacht Club

THURSDAY, MAY 11—

1:00 p. m.—Boat Ride to Island for Doctors and Wives.

* * *

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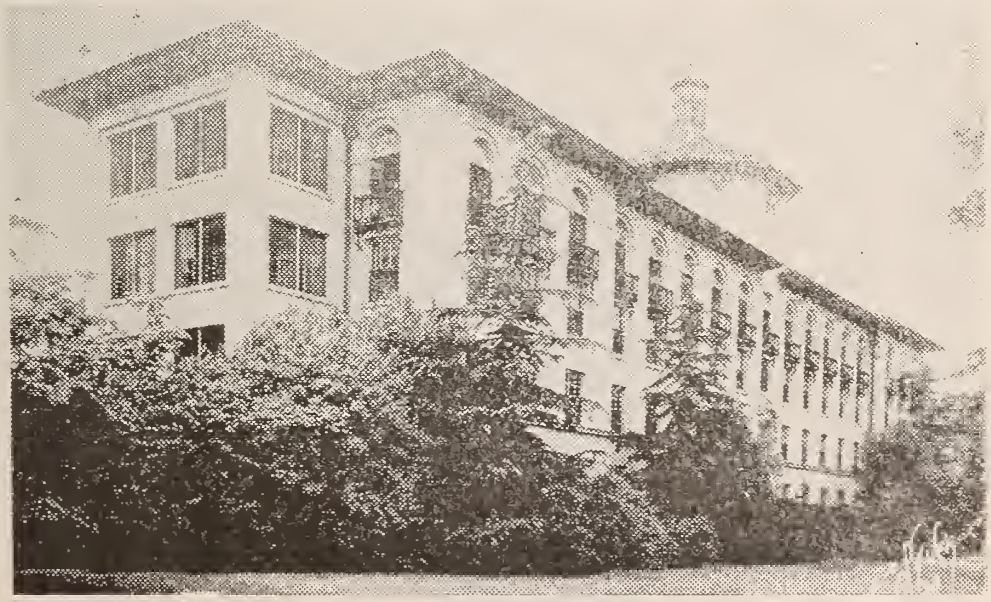

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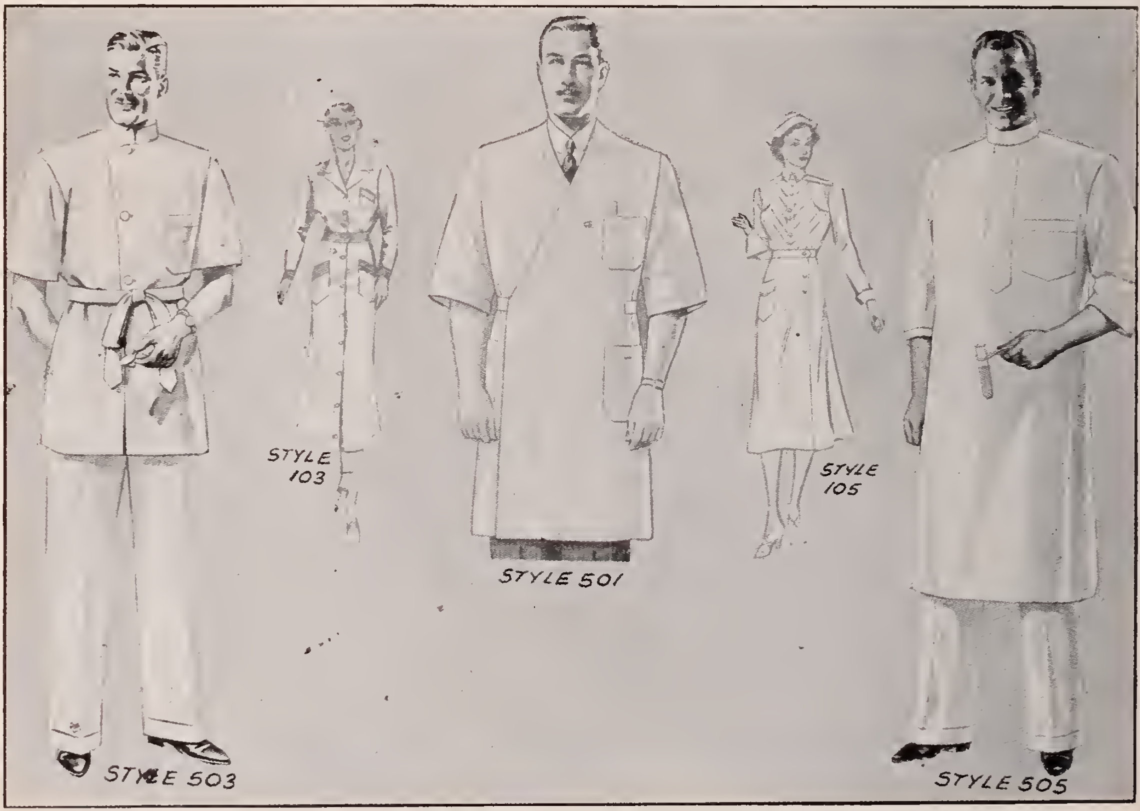
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